



0386022 AAN

Tel: 071 493 21 37
Email: info@ZooOmics.co.za
Physical Address: 525 Justice Mahomed Str, Muckleneuk, Pretoria 0002
Postal Address: PO Box 14356, Hatfield, Pretoria 0028

DNA PROFILE CERTIFICATE

General Information:

Test Animal	
ANIMAL ID/NAME	DW211225
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70349

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	89
BM2113	125	135
TGLA053	160	160
ETH10	217	219
ILSTS011	266	266
SPS113	153	153
RM067	90	94
TGLA126	Not Detected	
TGLA122	151	151
INRA023	202	206

STR Marker	Allele 1	Allele 2
BM1818	266	270
ETH003	121	121
ETH225	144	150
BM1824	180	188
SPS115	248	252
CSRM060	104	104
MGTG4B	135	135
CSSM066	183	187
ILSTS006	292	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.

Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**



CVML15/AG/00226

06-Mar-15

ZOCA2024-70349-DC

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

Test Animal	
ANIMAL ID/NAME	DW211226
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70350

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	93	97
BM2113	125	139
TGLA053	160	176
ETH10	217	217
ILSTS011	266	266
SPS113	Not Detected	
RM067	102	102
TGLA126	Not Detected	
TGLA122	151	151
INRA023	202	206

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	121	121
ETH225	144	150
BM1824	178	188
SPS115	248	252
CSRM060	92	104
MGTG4B	135	135
CSSM066	187	187
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

ISAG 
Institutional Member

CVML15/AG/00226

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

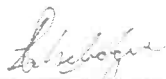
Test Animal	
ANIMAL ID/NAME	DW211227
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70351

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	125	135
TGLA053	160	176
ETH10	217	221
ILSTS011	266	266
SPS113	149	153
RM067	90	94
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	Not Detected	
ETH003	119	127
ETH225	148	148
BM1824	180	188
SPS115	248	260
CSRM060	100	102
MGTG4B	143	145
CSSM066	183	183
ILSTS006	292	296

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

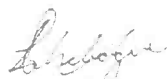
Test Animal	
ANIMAL ID/NAME	DW211228
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70352

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	89	93
BM2113	125	139
TGLA053	160	168
ETH10	217	219
ILSTS011	264	266
SPS113	143	151
RM067	94	96
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	125
ETH225	144	150
BM1824	180	182
SPS115	252	252
CSRM060	104	104
MGTG4B	143	143
CSSM066	187	187
ILSTS006	294	296

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70352-DC

ISAG 
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

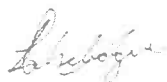
Test Animal	
ANIMAL ID/NAME	DW211231
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70353

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	89	93
BM2113	125	135
TGLA053	168	170
ETH10	217	217
ILSTS011	266	268
SPS113	151	153
RM067	90	96
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	266	270
ETH003	117	121
ETH225	144	146
BM1824	178	182
SPS115	248	248
CSRM060	100	102
MGTG4B	135	135
CSSM066	183	197
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

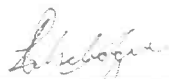
Test Animal	
ANIMAL ID/NAME	DW211237
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70354

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	87	97
BM2113	135	135
TGLA053	170	176
ETH10	217	219
ILSTS011	264	266
SPS113	141	153
RM067	102	102
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	208

STR Marker	Allele 1	Allele 2
BM1818	264	266
ETH003	117	121
ETH225	150	150
BM1824	182	188
SPS115	248	260
CSRM060	92	104
MGTG4B	135	135
CSSM066	183	187
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

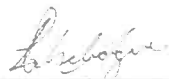
Test Animal	
ANIMAL ID/NAME	DW211238
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70355

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	89	97
BM2113	125	139
TGLA053	154	170
ETH10	217	219
ILSTS011	264	266
SPS113	Not Detected	
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	266	270
ETH003	121	125
ETH225	140	150
BM1824	182	188
SPS115	248	248
CSRM060	92	104
MGTG4B	135	135
CSSM066	185	197
ILSTS006	292	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

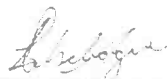
Test Animal	
ANIMAL ID/NAME	DW211239
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70356

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	81
BM2113	125	135
TGLA053	160	176
ETH10	217	219
ILSTS011	264	264
SPS113	141	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	117	121
ETH225	148	150
BM1824	182	188
SPS115	248	252
CSRM060	98	104
MGTG4B	135	147
CSSM066	187	189
ILSTS006	288	290

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

ISAG
Institutional Member

CVML15/AG/00226

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

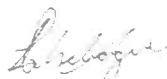
Test Animal	
ANIMAL ID/NAME	DW211240
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70357

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	87	97
BM2113	127	139
TGLA053	168	170
ETH10	217	219
ILSTS011	264	266
SPS113	151	151
RM067	90	94
TGLA126	Not Detected	
TGLA122	143	143
INRA023	202	206

STR Marker	Allele 1	Allele 2
BM1818	268	270
ETH003	121	121
ETH225	146	150
BM1824	178	180
SPS115	248	254
CSRM060	92	98
MGTG4B	135	141
CSSM066	183	197
ILSTS006	288	290

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

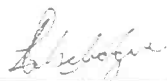
Test Animal	
ANIMAL ID/NAME	DW211243
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70358

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	87	97
BM2113	135	139
TGLA053	160	170
ETH10	217	219
ILSTS011	Not Detected	
SPS113	145	151
RM067	102	102
TGLA126	Not Detected	
TGLA122	143	151
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	258	270
ETH003	117	121
ETH225	140	150
BM1824	182	188
SPS115	248	256
CSRM060	92	98
MGTG4B	135	143
CSSM066	187	197
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

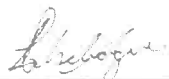
Test Animal	
ANIMAL ID/NAME	DW211244
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70359

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	135	135
TGLA053	176	176
ETH10	217	217
ILSTS011	Not Detected	
SPS113	151	153
RM067	90	90
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	208

STR Marker	Allele 1	Allele 2
BM1818	262	270
ETH003	121	125
ETH225	146	150
BM1824	178	188
SPS115	252	254
CSRM060	98	102
MGTG4B	135	147
CSSM066	183	187
ILSTS006	288	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70359-DC

ISAG
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

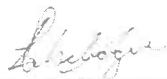
Test Animal	
ANIMAL ID/NAME	DW211245
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70360

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	81
BM2113	131	135
TGLA053	160	170
ETH10	217	219
ILSTS011	266	266
SPS113	151	151
RM067	90	90
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	262	262
ETH003	117	117
ETH225	150	150
BM1824	178	182
SPS115	248	254
CSRM060	98	102
MGTG4B	135	143
CSSM066	183	187
ILSTS006	288	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

ISAG
Institutional Member

CVML15/AG/00226

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

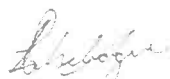
Test Animal	
ANIMAL ID/NAME	DW211246
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70361

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	81
BM2113	125	135
TGLA053	160	176
ETH10	217	217
ILSTS011	264	264
SPS113	142	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	262
ETH003	117	125
ETH225	144	144
BM1824	178	188
SPS115	252	260
CSRM060	98	104
MGTG4B	135	143
CSSM066	187	187
ILSTS006	290	290

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70361-DC

ISAG
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

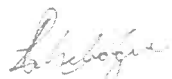
Test Animal	
ANIMAL ID/NAME	DW211247
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70362

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	89
BM2113	125	127
TGLA053	160	160
ETH10	217	219
ILSTS011	Not Detected	
SPS113	151	151
RM067	90	96
TGLA126	Not Detected	
TGLA122	149	151
INRA023	206	208

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	121
ETH225	150	150
BM1824	178	178
SPS115	248	248
CSRM060	92	104
MGTG4B	135	141
CSSM066	197	197
ILSTS006	288	292

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

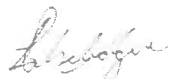
Test Animal	
ANIMAL ID/NAME	DW211251
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70363

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	135	139
TGLA053	176	176
ETH10	217	219
ILSTS011	266	268
SPS113	141	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	216

STR Marker	Allele 1	Allele 2
BM1818	264	270
ETH003	121	121
ETH225	140	150
BM1824	180	188
SPS115	248	254
CSRM060	92	104
MGTG4B	135	143
CSSM066	187	197
ILSTS006	288	290

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

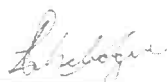
Test Animal	
ANIMAL ID/NAME	DW211254
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70364

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	87	97
BM2113	125	127
TGLA053	162	168
ETH10	217	219
ILSTS011	266	266
SPS113	149	151
RM067	90	96
TGLA126	Not Detected	
TGLA122	143	151
INRA023	202	206

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	117	121
ETH225	150	150
BM1824	178	180
SPS115	248	248
CSRM060	92	98
MGTG4B	141	141
CSSM066	183	197
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70364-DC

ISAG
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

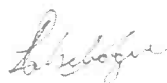
Test Animal	
ANIMAL ID/NAME	DW211255
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70365

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	135	135
TGLA053	176	182
ETH10	217	221
ILSTS011	266	266
SPS113	137	151
RM067	102	102
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	121	121
ETH225	140	148
BM1824	182	188
SPS115	248	248
CSRM060	92	98
MGTG4B	135	147
CSSM066	187	187
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

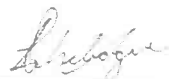
Test Animal	
ANIMAL ID/NAME	DW211257
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70366

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	139	139
TGLA053	168	170
ETH10	217	217
ILSTS011	266	268
SPS113	151	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	151	151
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	121
ETH225	150	150
BM1824	178	182
SPS115	248	252
CSRM060	92	104
MGTG4B	135	135
CSSM066	187	197
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

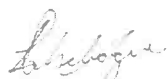
Test Animal	
ANIMAL ID/NAME	DW211258
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70367

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	125	139
TGLA053	170	176
ETH10	217	219
ILSTS011	264	266
SPS113	142	151
RM067	102	102
TGLA126	Not Detected	
TGLA122	143	151
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	264	268
ETH003	121	125
ETH225	150	150
BM1824	178	180
SPS115	248	248
CSRM060	92	104
MGTG4B	135	147
CSSM066	187	189
ILSTS006	288	290

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

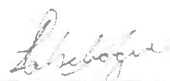
Test Animal	
ANIMAL ID/NAME	DW211259
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70368

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	89
BM2113	125	135
TGLA053	170	176
ETH10	217	221
ILSTS011	266	266
SPS113	Not Detected	
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	270
ETH003	121	125
ETH225	140	144
BM1824	178	188
SPS115	248	248
CSRM060	102	104
MGTG4B	135	135
CSSM066	183	197
ILSTS006	Not Detected	

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70368-DC



ISAG
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

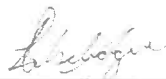
Test Animal	
ANIMAL ID/NAME	DW211270
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70369

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	81
BM2113	125	135
TGLA053	162	170
ETH10	217	217
ILSTS011	264	266
SPS113	151	153
RM067	96	102
TGLA126	Not Detected	
TGLA122	143	151
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	117
ETH225	150	150
BM1824	178	188
SPS115	248	248
CSRM060	98	104
MGTG4B	135	143
CSSM066	187	187
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70369-DC


ISAG
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

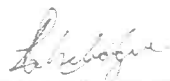
Test Animal	
ANIMAL ID/NAME	DW211272
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70370

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	97	97
BM2113	127	135
TGLA053	168	176
ETH10	217	217
ILSTS011	266	266
SPS113	151	153
RM067	90	90
TGLA126	Not Detected	
TGLA122	151	151
INRA023	200	206

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	121
ETH225	146	150
BM1824	178	180
SPS115	248	248
CSRM060	92	92
MGTG4B	135	135
CSSM066	183	197
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

ISAG 
Institutional Member

CVML15/AG/00226

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

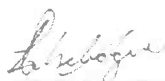
Test Animal	
ANIMAL ID/NAME	DW211275
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70371

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	87
BM2113	127	135
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	266	266
SPS113	151	151
RM067	90	96
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	266	270
ETH003	117	117
ETH225	150	150
BM1824	178	178
SPS115	248	248
CSRM060	92	104
MGTG4B	135	139
CSSM066	183	187
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

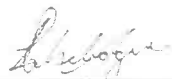
Test Animal	
ANIMAL ID/NAME	DW211277
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70372

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	127	135
TGLA053	160	170
ETH10	213	217
ILSTS011	Not Detected	
SPS113	Not Detected	
RM067	92	102
TGLA126	Not Detected	
TGLA122	151	171
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	121	125
ETH225	148	150
BM1824	178	182
SPS115	248	248
CSRM060	100	102
MGTG4B	135	143
CSSM066	183	183
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

ISAG 
Institutional Member

CVML15/AG/00226

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

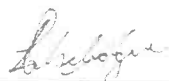
Test Animal	
ANIMAL ID/NAME	DW211278
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70373

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	81
BM2113	127	135
TGLA053	168	170
ETH10	217	219
ILSTS011	266	268
SPS113	153	153
RM067	90	90
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	264
ETH003	121	125
ETH225	144	150
BM1824	178	188
SPS115	252	252
CSRM060	102	102
MGTG4B	141	143
CSSM066	183	187
ILSTS006	288	290

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

Test Animal	
ANIMAL ID/NAME	DW211279
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70374

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	127	127
TGLA053	160	168
ETH10	217	219
ILSTS011	Not Detected	
SPS113	151	153
RM067	90	90
TGLA126	Not Detected	
TGLA122	151	151
INRA023	208	214

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	117
ETH225	148	150
BM1824	178	178
SPS115	248	254
CSRM060	92	102
MGTG4B	135	139
CSSM066	183	187
ILSTS006	292	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70374-DC


ISAG
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

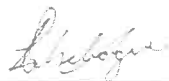
Test Animal	
ANIMAL ID/NAME	DW211280
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70375

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	127	135
TGLA053	160	170
ETH10	215	219
ILSTS011	266	266
SPS113	151	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	200	214

STR Marker	Allele 1	Allele 2
BM1818	264	266
ETH003	119	121
ETH225	148	150
BM1824	178	182
SPS115	248	254
CSRM060	102	102
MGTG4B	141	147
CSSM066	183	187
ILSTS006	292	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

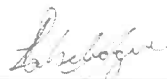
Test Animal	
ANIMAL ID/NAME	DW211281
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70376

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	97	97
BM2113	125	135
TGLA053	Not Detected	
ETH10	217	221
ILSTS011	264	266
SPS113	143	153
RM067	96	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	264
ETH003	117	117
ETH225	150	150
BM1824	182	188
SPS115	248	248
CSRM060	104	104
MGTG4B	135	135
CSSM066	Not Detected	
ILSTS006	290	292

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

Test Animal	
ANIMAL ID/NAME	DW211282
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70377

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	89
BM2113	125	135
TGLA053	Not Detected	
ETH10	215	217
ILSTS011	264	266
SPS113	153	153
RM067	92	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	121
ETH225	144	144
BM1824	178	182
SPS115	248	248
CSRM060	98	104
MGTG4B	135	143
CSSM066	Not Detected	
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

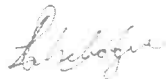
Test Animal	
ANIMAL ID/NAME	DW211283
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70378

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	93
BM2113	135	135
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	264	266
SPS113	151	153
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	119	125
ETH225	148	150
BM1824	178	182
SPS115	248	248
CSRM060	98	102
MGTG4B	135	135
CSSM066	187	203
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

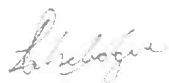
Test Animal	
ANIMAL ID/NAME	DW211284
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70379

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	89	97
BM2113	125	125
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	264	266
SPS113	151	151
RM067	94	96
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	270
ETH003	117	121
ETH225	146	150
BM1824	178	182
SPS115	248	248
CSRM060	92	104
MGTG4B	135	147
CSSM066	Not Detected	
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

ISAG 
Institutional Member

CVML15/AG/00226

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

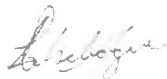
Test Animal	
ANIMAL ID/NAME	DW211285
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70380

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	89
BM2113	127	137
TGLA053	Not Detected	
ETH10	215	217
ILSTS011	264	266
SPS113	151	153
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	208	208

STR Marker	Allele 1	Allele 2
BM1818	264	270
ETH003	117	121
ETH225	150	150
BM1824	178	188
SPS115	248	248
CSRM060	92	104
MGTG4B	135	139
CSSM066	Not Detected	
ILSTS006	288	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

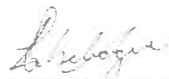
Test Animal	
ANIMAL ID/NAME	DW211286
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70381

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	87
BM2113	127	139
TGLA053	Not Detected	
ETH10	217	219
ILSTS011	266	266
SPS113	151	151
RM067	102	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	208	214

STR Marker	Allele 1	Allele 2
BM1818	266	266
ETH003	119	121
ETH225	144	150
BM1824	178	188
SPS115	248	248
CSRM060	92	98
MGTG4B	141	143
CSSM066	Not Detected	
ILSTS006	288	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226


ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

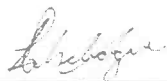
Test Animal	
ANIMAL ID/NAME	DW211287
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70382

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	97	97
BM2113	125	125
TGLA053	160	176
ETH10	217	217
ILSTS011	266	266
SPS113	151	153
RM067	102	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	202	206

STR Marker	Allele 1	Allele 2
BM1818	266	270
ETH003	117	119
ETH225	150	150
BM1824	178	180
SPS115	248	248
CSRM060	92	104
MGTG4B	135	141
CSSM066	Not Detected	
ILSTS006	288	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ZOCA2024-70382-DC

ISAG 
Institutional Member

06-Mar-15

10-Jun-24

DNA PROFILE CERTIFICATE

General Information:

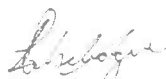
Test Animal	
ANIMAL ID/NAME	DW211290
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70383

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	125	131
TGLA053	160	168
ETH10	217	217
ILSTS011	266	266
SPS113	151	153
RM067	90	98
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	270
ETH003	117	125
ETH225	150	150
BM1824	178	188
SPS115	248	248
CSRM060	92	104
MGTG4B	141	143
CSSM066	Not Detected	
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

ISAG
Institutional Member

CVML15/AG/00226

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

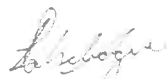
Test Animal	
ANIMAL ID/NAME	DW211291
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70384

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	89	97
BM2113	133	135
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	264	266
SPS113	143	153
RM067	96	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	264	264
ETH003	117	121
ETH225	140	150
BM1824	178	188
SPS115	248	254
CSRM060	92	98
MGTG4B	135	135
CSSM066	Not Detected	
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

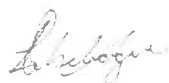
Test Animal	
ANIMAL ID/NAME	DW211292
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70385

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	89
BM2113	125	135
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	266	266
SPS113	151	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	200	206

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	119	121
ETH225	150	150
BM1824	178	180
SPS115	248	248
CSRM060	92	102
MGTG4B	135	141
CSSM066	Not Detected	
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

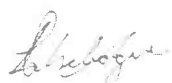
Test Animal	
ANIMAL ID/NAME	DW211294
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70386

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	125	125
TGLA053	Not Detected	
ETH10	217	223
ILSTS011	266	266
SPS113	151	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	208	214

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	119	125
ETH225	150	150
BM1824	178	182
SPS115	248	248
CSRM060	92	98
MGTG4B	139	141
CSSM066	Not Detected	
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

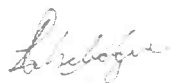
Test Animal	
ANIMAL ID/NAME	DW211297
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70387

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	89
BM2113	127	133
TGLA053	168	176
ETH10	217	217
ILSTS011	266	266
SPS113	151	153
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	208

STR Marker	Allele 1	Allele 2
BM1818	262	270
ETH003	117	119
ETH225	150	150
BM1824	178	188
SPS115	248	248
CSRM060	100	104
MGTG4B	135	141
CSSM066	Not Detected	
ILSTS006	292	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

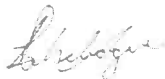
Test Animal	
ANIMAL ID/NAME	DW211301
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70388

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	125	135
TGLA053	154	154
ETH10	217	217
ILSTS011	264	268
SPS113	151	153
RM067	90	96
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	208

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	117	117
ETH225	148	150
BM1824	178	182
SPS115	248	254
CSRM060	92	104
MGTG4B	135	143
CSSM066	Not Detected	
ILSTS006	294	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

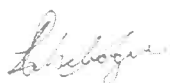
Test Animal	
ANIMAL ID/NAME	DW211302
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70389

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	97	97
BM2113	125	125
TGLA053	168	176
ETH10	217	217
ILSTS011	268	268
SPS113	147	151
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	266	266
ETH003	117	119
ETH225	148	150
BM1824	178	178
SPS115	248	254
CSRM060	100	104
MGTG4B	135	147
CSSM066	Not Detected	
ILSTS006	292	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

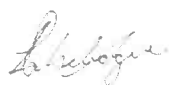
Test Animal	
ANIMAL ID/NAME	DW211306
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70390

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	97	97
BM2113	127	137
TGLA053	Not Detected	
ETH10	217	219
ILSTS011	264	266
SPS113	151	153
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	214

STR Marker	Allele 1	Allele 2
BM1818	266	270
ETH003	119	121
ETH225	150	150
BM1824	178	188
SPS115	248	252
CSRM060	92	102
MGTG4B	141	147
CSSM066	Not Detected	
ILSTS006	288	292

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

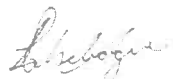
Test Animal	
ANIMAL ID/NAME	DW211307
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70391

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	81
BM2113	125	127
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	266	266
SPS113	151	151
RM067	102	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	262	266
ETH003	117	119
ETH225	146	150
BM1824	178	178
SPS115	248	252
CSRM060	98	104
MGTG4B	135	139
CSSM066	Not Detected	
ILSTS006	288	292

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

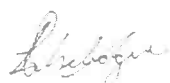
Test Animal	
ANIMAL ID/NAME	DW211309
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70392

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	89	97
BM2113	133	139
TGLA053	154	154
ETH10	217	217
ILSTS011	264	266
SPS113	143	151
RM067	90	96
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	208

STR Marker	Allele 1	Allele 2
BM1818	262	268
ETH003	121	121
ETH225	140	150
BM1824	178	180
SPS115	248	254
CSRM060	104	104
MGTG4B	135	135
CSSM066	Not Detected	
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG 
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

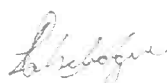
Test Animal	
ANIMAL ID/NAME	DW211310
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70393

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	81	97
BM2113	125	137
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	266	266
SPS113	151	153
RM067	90	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	270	270
ETH003	117	119
ETH225	144	150
BM1824	178	178
SPS115	248	248
CSRM060	92	102
MGTG4B	135	147
CSSM066	Not Detected	
ILSTS006	292	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.



Dr Christiaan Labuschagne
Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226

ISAG
Institutional Member

06-Mar-15

DNA PROFILE CERTIFICATE

General Information:

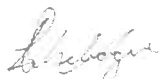
Test Animal	
ANIMAL ID/NAME	DW221313
BREED	Angus
SPECIES	Bovine
GENDER	Male
OWNER	IRWIN Dr D & MRS
LAB. NO	ZOCA2024-70394

DNA Profiling Results:

STR Marker	Allele 1	Allele 2
TGLA227	97	97
BM2113	125	139
TGLA053	Not Detected	
ETH10	217	217
ILSTS011	264	266
SPS113	151	151
RM067	102	102
TGLA126	Not Detected	
TGLA122	Not Detected	
INRA023	206	206

STR Marker	Allele 1	Allele 2
BM1818	264	266
ETH003	121	125
ETH225	150	150
BM1824	180	188
SPS115	248	254
CSRM060	92	104
MGTG4B	135	135
CSSM066	187	187
ILSTS006	290	294

The DNA profile represents the standardised alleles for the 12 International Society for Animal Genetics (ISAG, 2016) recommended markers. These alleles were obtained from STR analysis by capillary electrophoresis. The DNA profile includes additional markers as recommended by the Food and Agriculture Organization of the United Nations (FAO) for routine bovine parentage testing and identification.


Dr Christiaan Labuschagne
 Genomics Manager

10 June 2024

Date

****See disclaimer on reverse side**

CVML15/AG/00226


ISAG
 Institutional Member

06-Mar-15

ZOCA2024-70394-DC

10-Jun-24