



AGROTIS S.r.l.
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LABORATORIO GENETICA E SERVIZI
Via Bergamo 292, 26100 Cremona
Tel. 0372.560828 | info-lgs@agrotis.it | http://www.lgscr.it



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CERTIFICATO DI IDENTIFICAZIONE GENETICA/ GENETIC IDENTIFICATION CERTIFICATE

| | | | | | |
|---|--|--------------------------------------|------------|----------------------------------|------------|
| NOME SOGGETTO NAME | ----- | SPECIE SPECIE | BOVINE | RAZZA BREED | CHIANINA |
| MICROCHIP/MATRICOLA HERDBOOK N°/ID | IT054990285482 | TATUAGGIO TATTOO | ----- | DATA NASCITA DATE OF BIRTH | ----- |
| ROI/LOI/LIR | ----- | SESSO GENDER | M | GEMELLO MULTIPLE BIRTH | ----- |
| PADRE SIRE | IT054990203959 | | | | |
| MADRE DAM | IT054990190432 | | | | |
| DIAGNOSI DIAGNOSIS | SIRE and DAM qualify | | | | |
| CLIENTE/CUSTOMER | ANABIC, SS 317 – km 52,450, 06078 San Martino in colle (PG) | | | | |
| RAPPORTO DI PROVA n. TEST REPORT n | 22CA00919 | DATA EMISSIONE DATE OF ISSUE | 28/04/2022 | | |
| DATA RICEVIMENTO CAMPIONI DELIVERY DATE | 13/04/2022 | DATA INIZIO PROVA TEST START DATE | 14/04/2022 | DATA FINE PROVA TEST END DATE | 28/04/2022 |
| CODICE INTERNO LGS LGS SAMPLE ID | 22BO36736/01 | MATRICE DNA FROM | EARTAG | | |

| | |
|---|---|
| <i>Metodo di prova: test method:</i> | Analisi molecolare tramite Illumina® beadchip/Molecular analysis with Illumina® beadchip |
| <i>Incertezza di misura: Uncertainty of measurement:</i> | |
| <i>Informazioni: Information:</i> | <i>La diagnosi del presente rapporto di prova è stata formulata tramite analisi del genotipo SNP attenendosi alle linee guida dell'International Society for Animal Genetics (ISAG) approvate alla conferenza di Cairns (Luglio 2012) e dell'International Committee for Animal Recording (ICAR). The diagnosis of the present test report has been made through SNP profile analysis following the guidelines of the International Society for Animal Genetics (ISAG) approved at Cairns conference (July, 2012) and by the International Committee for Animal Recording (ICAR).</i> |
| <i>Il prelievo ed il campionamento sono a carico del cliente / the customer is responsible for sampling</i> | |
| <i>Il presente rapporto riguarda soltanto i campioni sottoposti a prova e non può essere riprodotto in forma parziale, salvo approvazione scritta di LGS This report is relative to the analysed sample. Reproduction of partial copy of the document is not allowed without written authorization from LGS</i> | |

LA RESPONSABILE DI LABORATORIO
THE LAB MANAGER

Dr. Cecilia Fontana



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GENOTIPO/GENOTYPE

| Indice/Index | Nome Marker/Marker Name | AB Allele | TOP Allele |
|--------------|---------------------------------------|-----------|------------|
| 1 | ARS-USMARC-Parent-AY761135-rs29003723 | AB | AT |
| 2 | ARS-USMARC-Parent-AY776154-no-rs | AB | AG |
| 3 | ARS-USMARC-Parent-AY842472-rs29001941 | AB | CG |
| 4 | ARS-USMARC-Parent-AY842473-rs29001956 | AB | AG |
| 5 | ARS-USMARC-Parent-AY842474-rs29003226 | AA | CC |
| 6 | ARS-USMARC-Parent-AY842475-rs29002127 | AB | AG |
| 7 | ARS-USMARC-Parent-AY844963-rs17871338 | AB | AG |
| 8 | ARS-USMARC-Parent-AY849381-rs29003287 | AA | AA |
| 9 | ARS-USMARC-Parent-AY850194-no-rs | BB | GG |
| 10 | ARS-USMARC-Parent-AY851162-no-rs | AB | AG |
| 11 | ARS-USMARC-Parent-AY851163-rs17871661 | AB | AG |
| 12 | ARS-USMARC-Parent-AY853302-no-rs | AB | AG |
| 13 | ARS-USMARC-Parent-AY853303-no-rs | BB | GG |
| 14 | ARS-USMARC-Parent-AY856094-rs17871190 | AB | AG |
| 15 | ARS-USMARC-Parent-AY858890-rs29002256 | AB | CG |
| 16 | ARS-USMARC-Parent-AY860426-no-rs | AA | AA |
| 17 | ARS-USMARC-Parent-AY863214-rs17871744 | AB | AG |
| 18 | ARS-USMARC-Parent-AY914316-rs17871403 | AA | AA |
| 19 | ARS-USMARC-Parent-AY916666-no-rs | AA | AA |
| 20 | ARS-USMARC-Parent-AY919868-rs29002211 | AB | AG |
| 21 | ARS-USMARC-Parent-AY929334-no-rs | BB | GG |
| 22 | ARS-USMARC-Parent-AY937242-rs17872223 | AA | AA |
| 23 | ARS-USMARC-Parent-AY939849-rs17870274 | AA | AA |
| 24 | ARS-USMARC-Parent-AY941204-rs17872131 | BB | GG |
| 25 | ARS-USMARC-Parent-AY943841-rs17871566 | BB | GG |
| 26 | ARS-USMARC-Parent-DQ381152-rs29002408 | AB | AT |
| 27 | ARS-USMARC-Parent-DQ381153-rs29012842 | AB | AC |
| 28 | ARS-USMARC-Parent-DQ404149-no-rs | BB | GG |
| 29 | ARS-USMARC-Parent-DQ404150-rs29012530 | BB | CC |
| 30 | ARS-USMARC-Parent-DQ404151-rs29019282 | AB | AG |
| 31 | ARS-USMARC-Parent-DQ404152-rs29022245 | AA | AA |
| 32 | ARS-USMARC-Parent-DQ404153-no-rs | BB | GG |
| 33 | ARS-USMARC-Parent-DQ435443-rs29010802 | AA | AA |
| 34 | ARS-USMARC-Parent-DQ451555-rs29010795 | BB | GG |
| 35 | ARS-USMARC-Parent-DQ468384-rs29003967 | AB | AC |
| 36 | ARS-USMARC-Parent-DQ470475-no-rs | BB | TT |
| 37 | ARS-USMARC-Parent-DQ489377-rs29026932 | AA | AA |



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|----|---------------------------------------|----|----|
| 38 | ARS-USMARC-Parent-DQ500958-no-rs | BB | GG |
| 39 | ARS-USMARC-Parent-DQ647186-rs29014143 | BB | GG |
| 40 | ARS-USMARC-Parent-DQ647187-rs29010510 | BB | GG |
| 41 | ARS-USMARC-Parent-DQ647189-rs29012226 | AA | AA |
| 42 | ARS-USMARC-Parent-DQ647190-rs29013632 | AB | AG |
| 43 | ARS-USMARC-Parent-DQ650635-rs29012174 | BB | GG |
| 44 | ARS-USMARC-Parent-DQ650636-rs29024525 | AB | AG |
| 45 | ARS-USMARC-Parent-DQ674265-rs29011266 | AA | AA |
| 46 | ARS-USMARC-Parent-DQ786757-rs29019900 | BB | GG |
| 47 | ARS-USMARC-Parent-DQ786758-rs29024430 | AB | AC |
| 48 | ARS-USMARC-Parent-DQ786759-rs29026696 | BB | GG |
| 49 | ARS-USMARC-Parent-DQ786761-rs29012840 | AA | AA |
| 50 | ARS-USMARC-Parent-DQ786762-rs29010772 | BB | CC |
| 51 | ARS-USMARC-Parent-DQ786763-rs29020472 | BB | TT |
| 52 | ARS-USMARC-Parent-DQ786764-no-rs | AA | AA |
| 53 | ARS-USMARC-Parent-DQ786766-rs29012070 | AB | AG |
| 54 | ARS-USMARC-Parent-DQ789028-rs29017713 | AA | AA |
| 55 | ARS-USMARC-Parent-DQ837643-rs29018818 | BB | GG |
| 56 | ARS-USMARC-Parent-DQ837644-rs29010468 | BB | CC |
| 57 | ARS-USMARC-Parent-DQ837645-rs29015870 | AB | AG |
| 58 | ARS-USMARC-Parent-DQ839235-rs29012691 | BB | CC |
| 59 | ARS-USMARC-Parent-DQ846688-rs29023691 | AB | AG |
| 60 | ARS-USMARC-Parent-DQ846690-no-rs | AA | AA |
| 61 | ARS-USMARC-Parent-DQ846691-rs29019814 | BB | GG |
| 62 | ARS-USMARC-Parent-DQ846692-rs29010281 | BB | GG |
| 63 | ARS-USMARC-Parent-DQ846693-rs29017621 | AB | AG |
| 64 | ARS-USMARC-Parent-DQ866817-no-rs | AB | AG |
| 65 | ARS-USMARC-Parent-DQ866818-rs29011701 | AB | AC |
| 66 | ARS-USMARC-Parent-DQ888309-rs29013741 | AA | AA |
| 67 | ARS-USMARC-Parent-DQ888310-rs29012422 | BB | CC |
| 68 | ARS-USMARC-Parent-DQ888311-rs29017313 | BB | CC |
| 69 | ARS-USMARC-Parent-DQ888313-no-rs | AB | AG |
| 70 | ARS-USMARC-Parent-DQ916057-rs29009979 | AA | AA |
| 71 | ARS-USMARC-Parent-DQ916058-rs29016146 | AB | AG |
| 72 | ARS-USMARC-Parent-DQ916059-rs29009907 | AA | AA |
| 73 | ARS-USMARC-Parent-DQ984825-rs29012457 | BB | GG |
| 74 | ARS-USMARC-Parent-DQ984826-rs29027559 | AB | AT |
| 75 | ARS-USMARC-Parent-DQ984827-rs29012019 | BB | GG |
| 76 | ARS-USMARC-Parent-DQ990832-rs29015065 | AB | AG |
| 77 | ARS-USMARC-Parent-DQ990833-rs29010147 | AA | AA |
| 78 | ARS-USMARC-Parent-DQ990834-rs29013727 | BB | GG |
| 79 | ARS-USMARC-Parent-DQ995976-no-rs | AB | AG |
| 80 | ARS-USMARC-Parent-DQ995977-rs29020834 | BB | GG |
| 81 | ARS-USMARC-Parent-EF026084-rs29025380 | AB | AG |
| 82 | ARS-USMARC-Parent-EF026086-rs29013660 | AB | AG |
| 83 | ARS-USMARC-Parent-EF026087-rs29011643 | AB | AG |
| 84 | ARS-USMARC-Parent-EF028073-rs29014953 | AA | AA |



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|-----|---------------------------------------|----|----|
| 85 | ARS-USMARC-Parent-EF034080-rs29024749 | AB | AG |
| 86 | ARS-USMARC-Parent-EF034081-rs29009668 | AB | AT |
| 87 | ARS-USMARC-Parent-EF034082-rs29013532 | AA | AA |
| 88 | ARS-USMARC-Parent-EF034083-rs29018286 | BB | CC |
| 89 | ARS-USMARC-Parent-EF034084-rs29016185 | BB | GG |
| 90 | ARS-USMARC-Parent-EF034085-rs29025677 | AA | AA |
| 91 | ARS-USMARC-Parent-EF034086-no-rs | AB | AG |
| 92 | ARS-USMARC-Parent-EF034087-no-rs | BB | GG |
| 93 | ARS-USMARC-Parent-EF042090-no-rs | AA | AA |
| 94 | ARS-USMARC-Parent-EF042091-rs29014974 | BB | GG |
| 95 | ARS-USMARC-Parent-EF093509-rs29015170 | AB | AT |
| 96 | ARS-USMARC-Parent-EF093511-rs29012316 | AA | AA |
| 97 | ARS-USMARC-Parent-EF093512-rs29013546 | BB | GG |
| 98 | ARS-USMARC-Parent-EF141102-rs29015783 | AA | AA |
| 99 | ARS-USMARC-Parent-EF150946-rs29023666 | AB | AG |
| 100 | ARS-USMARC-Parent-EF164803-rs29011141 | AA | AA |
| 101 | ARS-BFGL-BAC-19454 | AA | AA |
| 102 | ARS-BFGL-BAC-27364 | AA | AA |
| 103 | ARS-BFGL-BAC-35552 | AA | AA |
| 104 | ARS-BFGL-NGS-10035 | BB | GG |
| 105 | ARS-BFGL-NGS-101456 | BB | GG |
| 106 | ARS-BFGL-NGS-102169 | BB | CC |
| 107 | ARS-BFGL-NGS-106015 | AA | AA |
| 108 | ARS-BFGL-NGS-111053 | BB | GG |
| 109 | ARS-BFGL-NGS-111076 | BB | GG |
| 110 | ARS-BFGL-NGS-111114 | AA | AA |
| 111 | ARS-BFGL-NGS-112094 | AA | AA |
| 112 | ARS-BFGL-NGS-112325 | BB | GG |
| 113 | ARS-BFGL-NGS-11383 | AA | AA |
| 114 | ARS-BFGL-NGS-114006 | BB | GG |
| 115 | ARS-BFGL-NGS-115514 | AB | AG |
| 116 | ARS-BFGL-NGS-117319 | BB | GG |
| 117 | ARS-BFGL-NGS-117322 | BB | GG |
| 118 | ARS-BFGL-NGS-118319 | AB | AC |
| 119 | ARS-BFGL-NGS-118340 | AA | AA |
| 120 | ARS-BFGL-NGS-119662 | AB | AG |
| 121 | ARS-BFGL-NGS-14740 | BB | GG |
| 122 | ARS-BFGL-NGS-15506 | BB | GG |
| 123 | ARS-BFGL-NGS-15731 | AA | AA |
| 124 | ARS-BFGL-NGS-24419 | AB | AG |
| 125 | ARS-BFGL-NGS-26517 | AA | AA |
| 126 | ARS-BFGL-NGS-27577 | AB | AG |
| 127 | ARS-BFGL-NGS-31640 | AA | AA |
| 128 | ARS-BFGL-NGS-31807 | AA | AA |
| 129 | ARS-BFGL-NGS-36513 | AA | AA |
| 130 | ARS-BFGL-NGS-38423 | BB | GG |
| 131 | ARS-BFGL-NGS-38620 | AB | AG |



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|-----|---------------------------------------|----|----|
| 132 | ARS-BFGL-NGS-39978 | AA | AA |
| 133 | ARS-BFGL-NGS-42283 | BB | GG |
| 134 | ARS-BFGL-NGS-42505 | AA | AA |
| 135 | ARS-BFGL-NGS-55943 | AB | AG |
| 136 | ARS-BFGL-NGS-57711 | BB | GG |
| 137 | ARS-BFGL-NGS-58613 | AA | AA |
| 138 | ARS-BFGL-NGS-67146 | AA | AA |
| 139 | ARS-BFGL-NGS-70946 | AB | AC |
| 140 | ARS-BFGL-NGS-72471 | BB | CC |
| 141 | ARS-BFGL-NGS-76191 | AA | AA |
| 142 | ARS-BFGL-NGS-76330 | AA | AA |
| 143 | ARS-BFGL-NGS-86662 | AA | AA |
| 144 | ARS-BFGL-NGS-93119 | AB | AG |
| 145 | ARS-BFGL-NGS-96125 | BB | GG |
| 146 | ARS-BFGL-NGS-99210 | AA | AA |
| 147 | ARS-USMARC-569 | AB | AG |
| 148 | ARS-USMARC-Parent-AY841151-rs29003466 | AA | AA |
| 149 | ARS-USMARC-Parent-DQ786765-rs29009858 | AB | AC |
| 150 | ARS-USMARC-Parent-EF026085-rs29021607 | AB | AC |
| 151 | ARS-USMARC-Parent-EF089234-rs29020870 | AB | AT |
| 153 | BTA-11701-rs29017459 | BB | GG |
| 154 | BTA-30857-no-rs | AB | AG |
| 155 | BTA-37062-no-rs | AA | AA |
| 156 | BTA-73768-no-rs | AA | AA |
| 157 | BTA-92021-no-rs | AA | AA |
| 158 | BTB-00188171 | AB | AG |
| 159 | BTB-00394801 | AB | AC |
| 160 | BTB-00420215 | AA | AA |
| 161 | BTB-00818821 | BB | GG |
| 162 | BTB-01057979 | AA | AA |
| 163 | BTB-01285245 | AB | AG |
| 164 | BTB-01371672 | AB | AG |
| 165 | BTB-01416427 | AB | AG |
| 166 | BTB-01478115 | AA | AA |
| 167 | BTB-01902778 | BB | GG |
| 168 | BTB-01980499 | BB | GG |
| 169 | Hapmap24215-BTA-163266 | BB | CC |
| 170 | Hapmap31098-BTA-136127 | AB | AG |
| 171 | Hapmap34424-BES10_Contig566_926 | AB | AG |
| 172 | Hapmap35535-SCAFFOLD86180_8791 | AA | AA |
| 173 | Hapmap36588-SCAFFOLD90561_9460 | BB | GG |
| 174 | Hapmap39425-BTA-70290 | BB | CC |
| 175 | Hapmap39461-BTA-109898 | AA | AA |
| 176 | Hapmap40148-BTA-92999 | BB | CC |
| 177 | Hapmap40729-BTA-40319 | AB | AG |
| 178 | Hapmap41591-BTA-59790 | BB | GG |
| 179 | Hapmap42648-BTA-71195 | AB | AG |



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|-----|------------------------|----|----|
| 180 | Hapmap43057-BTA-80741 | AA | AA |
| 181 | Hapmap43142-BTA-107561 | BB | GG |
| 182 | Hapmap43792-BTA-122725 | AA | AA |
| 183 | Hapmap43953-BTA-83292 | BB | GG |
| 184 | Hapmap46550-BTA-103548 | BB | TT |
| 185 | Hapmap46653-BTA-47447 | AB | AT |
| 186 | Hapmap47281-BTA-40051 | AA | AA |
| 187 | Hapmap49452-BTA-112834 | AA | AA |
| 188 | Hapmap50598-BTA-122724 | AB | AG |
| 189 | Hapmap51227-BTA-41809 | AB | AG |
| 190 | Hapmap51527-BTA-97415 | AB | AG |
| 191 | Hapmap51908-BTA-63031 | AA | AA |
| 192 | Hapmap52240-rs29013844 | AB | AC |
| 193 | Hapmap54020-rs29023153 | AB | AG |
| 194 | Hapmap54313-rs29012632 | AA | AA |
| 195 | Hapmap54547-rs29012198 | AA | AA |
| 196 | Hapmap55441-rs29010990 | BB | GG |
| 197 | Hapmap59876-rs29018046 | AB | AG |
| 198 | Hapmap60017-rs29023471 | AA | AA |
| 199 | UA-IFASA-5034 | AB | AG |
| 200 | UA-IFASA-6532 | AA | AA |
| | | | |