



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



Accredited genetic  
laboratory  
Exp. 12/2022

### CERTIFICATO DI IDENTIFICAZIONE GENETICA/ GENETIC IDENTIFICATION CERTIFICATE

NOME SOGGETTO NAME		SPECIE SPECIE	BOVINE	RAZZA BREED	MARCHIGIANA
MICROCHIP/MATRICOLA HERDBOOK N°/ID	IT067990130463	TATUAGGIO TATTOO		DATA NASCITA DATE OF BIRTH	
ROI/LOI/LIR		SESSO GENDER	M	GEMELLO MULTIPLE BIRTH	
PADRE SIRE	IT062990185896				
MADRE DAM	IT067990088798				
DIAGNOSI DIAGNOSIS	SIRE and DAM qualify				
<b>CLIENTE/CUSTOMER</b>	<b>ANABIC, SS 317 – km 52,450, 06078 San Martino in colle (PG)</b>				
RAPPORTO DI PROVA n. TEST REPORT n	21CA02035	DATA EMISSIONE DATE OF ISSUE	02/11/2021		
DATA RICEVIMENTO CAMPIONI DELIVERY DATE	22/01/2021	DATA INIZIO PROVA TEST START DATE	26/01/2021	DATA FINE PROVA TEST END DATE	05/02/2021
CODICE INTERNO LGS LGS SAMPLE ID	21BO31044	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>	

IL RESPONSABILE DI LABORATORIO  
THE LAB MANAGER

Dr. Raffaele Mazza



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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	BB	GG
4	ARS-USMARC-Parent-AY842473-rs29001956	BB	GG
5	ARS-USMARC-Parent-AY842474-rs29003226	BB	GG
6	ARS-USMARC-Parent-AY842475-rs29002127	AB	AG
7	ARS-USMARC-Parent-AY844963-rs17871338	BB	GG
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	AA	AA
13	ARS-USMARC-Parent-AY853303-no-rs	AA	AA
14	ARS-USMARC-Parent-AY856094-rs17871190	AB	AG
15	ARS-USMARC-Parent-AY858890-rs29002256	AA	CC
16	ARS-USMARC-Parent-AY860426-no-rs	AB	AC
17	ARS-USMARC-Parent-AY863214-rs17871744	AB	AG
18	ARS-USMARC-Parent-AY914316-rs17871403	AB	AC
19	ARS-USMARC-Parent-AY916666-no-rs	BB	GG
20	ARS-USMARC-Parent-AY919868-rs29002211	AB	AG
21	ARS-USMARC-Parent-AY929334-no-rs	BB	GG
22	ARS-USMARC-Parent-AY937242-rs17872223	AB	AG
23	ARS-USMARC-Parent-AY939849-rs17870274	AB	AG
24	ARS-USMARC-Parent-AY941204-rs17872131	AB	AG
25	ARS-USMARC-Parent-AY943841-rs17871566	AB	AG
26	ARS-USMARC-Parent-DQ381152-rs29002408	AA	AA
27	ARS-USMARC-Parent-DQ381153-rs29012842	AB	AC
28	ARS-USMARC-Parent-DQ404149-no-rs	AB	AG
29	ARS-USMARC-Parent-DQ404150-rs29012530	AB	AC
30	ARS-USMARC-Parent-DQ404151-rs29019282	AB	AG
31	ARS-USMARC-Parent-DQ404152-rs29022245	AB	AG
32	ARS-USMARC-Parent-DQ404153-no-rs	BB	GG
33	ARS-USMARC-Parent-DQ435443-rs29010802	BB	CC
34	ARS-USMARC-Parent-DQ451555-rs29010795	AA	AA
35	ARS-USMARC-Parent-DQ468384-rs29003967	AA	AA
36	ARS-USMARC-Parent-DQ470475-no-rs	BB	TT
37	ARS-USMARC-Parent-DQ489377-rs29026932	AA	AA
38	ARS-USMARC-Parent-DQ500958-no-rs	BB	GG
39	ARS-USMARC-Parent-DQ647186-rs29014143	AB	AG
40	ARS-USMARC-Parent-DQ647187-rs29010510	AA	AA



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



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84	ARS-USMARC-Parent-EF028073-rs29014953	BB	GG
85	ARS-USMARC-Parent-EF034080-rs29024749	BB	GG
86	ARS-USMARC-Parent-EF034081-rs29009668	AB	AT
87	ARS-USMARC-Parent-EF034082-rs29013532	BB	GG
88	ARS-USMARC-Parent-EF034083-rs29018286	BB	CC
89	ARS-USMARC-Parent-EF034084-rs29016185	AB	CG
90	ARS-USMARC-Parent-EF034085-rs29025677	AB	AG
91	ARS-USMARC-Parent-EF034086-no-rs	BB	GG
92	ARS-USMARC-Parent-EF034087-no-rs	BB	GG
93	ARS-USMARC-Parent-EF042090-no-rs	AB	AG
94	ARS-USMARC-Parent-EF042091-rs29014974	AA	AA
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	AB	AG
101	ARS-BFGL-BAC-19454	BB	GG
102	ARS-BFGL-BAC-27364	AA	AA
103	ARS-BFGL-BAC-35552	AB	AG
104	ARS-BFGL-NGS-10035	BB	GG
105	ARS-BFGL-NGS-101456	AB	AG
106	ARS-BFGL-NGS-102169	BB	CC
107	ARS-BFGL-NGS-106015	AB	AG
108	ARS-BFGL-NGS-111053	AB	AG
109	ARS-BFGL-NGS-111076	BB	GG
110	ARS-BFGL-NGS-111114	BB	CC
111	ARS-BFGL-NGS-112094	AA	AA
112	ARS-BFGL-NGS-112325	AA	AA
113	ARS-BFGL-NGS-11383	AA	AA
114	ARS-BFGL-NGS-114006	AB	AG
115	ARS-BFGL-NGS-115514	AB	AG
116	ARS-BFGL-NGS-117319	BB	GG
117	ARS-BFGL-NGS-117322	AB	AG
118	ARS-BFGL-NGS-118319	BB	CC
119	ARS-BFGL-NGS-118340	AB	AC
120	ARS-BFGL-NGS-119662	AA	AA
121	ARS-BFGL-NGS-14740	AB	AG
122	ARS-BFGL-NGS-15506	BB	GG
123	ARS-BFGL-NGS-15731	AA	AA
124	ARS-BFGL-NGS-24419	BB	GG
125	ARS-BFGL-NGS-26517	AB	AG
126	ARS-BFGL-NGS-27577	AA	AA



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127	ARS-BFGL-NGS-31640	AB	AG
128	ARS-BFGL-NGS-31807	AB	AG
129	ARS-BFGL-NGS-36513	AA	AA
130	ARS-BFGL-NGS-38423	AB	AG
131	ARS-BFGL-NGS-38620	BB	GG
132	ARS-BFGL-NGS-39978	AB	AG
133	ARS-BFGL-NGS-42283	AA	AA
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	BB	GG
139	ARS-BFGL-NGS-70946	AA	AA
140	ARS-BFGL-NGS-72471	AA	AA
141	ARS-BFGL-NGS-76191	AA	AA
142	ARS-BFGL-NGS-76330	AB	AG
143	ARS-BFGL-NGS-86662	AB	AC
144	ARS-BFGL-NGS-93119	AA	AA
145	ARS-BFGL-NGS-96125	AA	AA
146	ARS-BFGL-NGS-99210	AA	AA
147	ARS-USMARC-569	AA	AA
148	ARS-USMARC-Parent-AY841151-rs29003466	AA	AA
149	ARS-USMARC-Parent-DQ786765-rs29009858	AB	AC
150	ARS-USMARC-Parent-EF026085-rs29021607	AA	AA
151	ARS-USMARC-Parent-EF089234-rs29020870	AA	AA
153	BTA-11701-rs29017459	AB	AG
154	BTA-30857-no-rs	BB	GG
155	BTA-37062-no-rs	AB	AC
156	BTA-73768-no-rs	AB	AG
157	BTA-92021-no-rs	AA	AA
158	BTB-00188171	AB	AG
159	BTB-00394801	AA	AA
160	BTB-00420215	AA	AA
161	BTB-00818821	BB	GG
162	BTB-01057979	BB	GG
163	BTB-01285245	BB	GG
164	BTB-01371672	AA	AA
165	BTB-01416427	BB	GG
166	BTB-01478115	AA	AA
167	BTB-01902778	AB	AG
168	BTB-01980499	AB	AG
169	Hapmap24215-BTA-163266	AB	AC
170	Hapmap31098-BTA-136127	AA	AA



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171	Hapmap34424-BES10_Contig566_926	AA	AA
172	Hapmap35535-SCAFFOLD86180_8791	AB	AG
173	Hapmap36588-SCAFFOLD90561_9460	BB	GG
174	Hapmap39425-BTA-70290	AB	AC
175	Hapmap39461-BTA-109898	AB	AC
176	Hapmap40148-BTA-92999	AB	AC
177	Hapmap40729-BTA-40319	AA	AA
178	Hapmap41591-BTA-59790	BB	GG
179	Hapmap42648-BTA-71195	BB	GG
180	Hapmap43057-BTA-80741	AA	AA
181	Hapmap43142-BTA-107561	AA	AA
182	Hapmap43792-BTA-122725	AB	AG
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	AB	AG
188	Hapmap50598-BTA-122724	AA	AA
189	Hapmap51227-BTA-41809	AB	AG
190	Hapmap51527-BTA-97415	AA	AA
191	Hapmap51908-BTA-63031	AA	AA
192	Hapmap52240-rs29013844	AA	AA
193	Hapmap54020-rs29023153	AA	AA
194	Hapmap54313-rs29012632	BB	GG
195	Hapmap54547-rs29012198	AA	AA
196	Hapmap55441-rs29010990	BB	GG
197	Hapmap59876-rs29018046	AA	AA
198	Hapmap60017-rs29023471	AB	AG
199	UA-IFASA-5034	AB	AG
200	UA-IFASA-6532	AB	AG