

Genetic profile test results

Horse and owner information

HORSE:

CPH Ulane only play

DATE OF BIRTH:

05/16/2021

BREED:

Paint (Tobiano)

AGE:

2 m.o.

COLOR:

Classic Dun

SEX:

Mare

DISCIPLINE:

All Around

HEIGHT:

-

REGISTRY:

-

REG NUMBER:

-

SIRE:

Giant heart rof

DAM:

CPH Only crystal valu

SIRE REG & NO.:

American Paint Horse Association
1.060.215

DAM REG & NO.:

American Paint Horse Association
1.055.391

OWNER:

Cecile Penverne

ADDRESS:

la villeneuve zinsec

PHONE:

0662307475

CITY, STATE:

Berné, EUROPE

EMAIL:

cymelapainthorse@free.fr

POSTAL CODE, COUNTRY:

56240, FRANCE

Genetic profile test results

Results summary

VARIANT SUMMARIES:

Color: **A/a, E/E, D/D, TO/n**Gait: **Neg for DMRT3**Temperament: **Curious**Speed: **Sprint Type**

APHA:

LWO **n/n**, GBED **n/n**, HERDA **n/n**, HYPP **n/n**, MH **n/n**, PSSM1 **n/n**

COAT COLOR:

Bay Dun

Bay (A, E) + Dun (D): A horse with Bay (A, E) typically have dark legs, mane, tail, and ear tips against a light brown or golden base coat. The Dun markings appear as dorsal striping, leg bars and occasionally shadow markings on the shoulders and face.

Tobiano (TO) - TO/n

TO/n - One Tobiano (TO) variant detected; may result in large white markings on body, face and legs (occasionally produces 'minimal' or 'slipped' Tobiano horse with very little white only on face and lower legs (ongoing heritability study for minimal Tobiano). Horse has 50% chance of passing to any offspring.

Dun (D) - D/D

Dun (D) is a modifier resulting in lightening of the base coat color, often revealing characteristic Primitive Markings (dorsal stripe, leg barring, shadows on the shoulder and face).

HEALTH VARIANTS (INCONCLUSIVE OR NOT TESTED):

Hydrocephalus (HDC)**Equine Metabolic Syndrome Susceptibility Risk (EMS)****Equine Recurrent Uveitis Susceptibility Risk (ERUR)****Naked Foal Syndrome (NFS)**

SAMPLE ID: 071321_044/20210518-111538-3188

Genetic profile test results

Dwarfism (D)

Immune-mediated Myositis (IMM)

"Warmblood" Fragile Foal Syndrome (FFS)

Hoof Wall Separation Disease (HWSD)

Recurrent Laryngeal Neuropathy (RLN)

Laminitis Susceptibility Risk - Equine Metabolic Syndrome related (LAM)

Equine Recurrent Uveitis Symptom Severity (ERUS)

Squamous Cell Carcinoma Susceptibility Risk (SCC)

Friesian Dwarfism (FD)

Genetic profile test results


Coat color


BASE:

Agouti (A) - A/a  **ASIP** **Likely Affected**
 1 variant detected


Black (E) - E/E  **MC1R** **Black Based**
 2 variants detected

MODIFIERS:

Grey (G) - n/n  **STX17A** **Negative**
 0 variants detected

Brindle (BR1) - n/n  **MBTPS2BR1** **Negative**
 0 variants detected

DILUTES:

Dun (D) - D/D  **TBX3** **Likely Affected**
 2 variants detected

Champagne (CH) - n/n  **SLC36A1** **Negative**
 0 variants detected

Silver (Z) - n/n  **PMEL17** **Negative**
 0 variants detected

Cream (CR) - n/n  **SLC45A2** **Negative**
 0 variants detected










Pearl (PRL) - n/n  **SLC45A2** **Negative**
 0 variants detected

WHITES:

Tobiano (TO) - TO/n  **ECA3** **Likely Affected**

SAMPLE ID: 071321_044/20210518-111538-3188

Genetic profile test results


			1 variant detected
Frame/Lethal White Overo (LWO) - n/n		EDNRB	Negative
			0 variants detected
Leopard Spotting Complex (LP) - n/n		TRPM1	Negative
			0 variants detected
Pattern 1 (PATN1) - n/n		RFWD3	Negative
			0 variants detected
Sabino1 (SB1) - n/n		KIT	Negative
			0 variants detected
Splashed White (SW1) - n/n		MITF	Negative
			0 variants detected
Splashed White (SW2) - n/n		PAX3	Negative
			0 variants detected
Splashed White (SW3) - n/n		MITF	Negative
			0 variants detected
Splashed White (SW4) - n/n		PAX3	Negative
			0 variants detected
Dominant White (W) - n/n		KIT	Negative
			0 variants detected


SAMPLE ID: 071321_044/20210518-111538-3188


Genetic profile test results

Health variants


COLOR RELATED RISK:


Lethal White Overo (LWO) - n/n		EDNRB	Negative 0 variants detected
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Congenital Stationary Night Blindness (CSNB) - n/n		TRPM1	Negative 0 variants detected
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Multiple Congenital Ocular Anomalies (MCOA) - n/n		PMEL17	Negative 0 variants detected
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IMMUNE SYSTEM:


Foal Immunodeficiency Syndrome (FIS) - n/n		SLC5A3	Negative 0 variants detected
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Severe Combined Immunodeficiency (SCID) - n/n		DNAPK	Negative 0 variants detected
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West Nile Virus Symptom Susceptibility Risk (WNVR) - n/n		OAS1	Negative 0 variants detected
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Immune-mediated Myositis (IMM)		MYH1	Not ordered
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MUSCLE DISORDERS:

Glycogen Branching Enzyme Deficiency (GBED) - n/n		GBE1	Negative 0 variants detected
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Hyperkalemic Partial Paralysis (HYPP) - n/n		SCN4A	Negative 0 variants detected
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SAMPLE ID: 071321_044/20210518-111538-3188

Genetic profile test results

Malignant Hyperthermia (MH) - n/n		RYR1	Negative 0 variants detected
Myotonia (MYT) - n/n		CLCN4	Negative 0 variants detected
Polysaccharide Storage Myopathy type 1 (PSSM1) - n/n		GYS1	Negative 0 variants detected
NEUROLOGIC DISORDERS:			
Cerebellar Abiotrophy (CA) - n/n		MUTYH	Negative 0 variants detected
Lavender Foal Syndrome (LFS) - n/n		MYO5A	Negative 0 variants detected
Hydrocephalus (HDC)		B3GALNT2	Not ordered
Recurrent Laryngeal Neuropathy (RLN)		ECA3	Not ordered
REPRODUCTIVE DISORDERS:			
Androgen Insensitivity Syndrome (AIS) - n/n		AR	Negative 0 variants detected
Impaired Acrosomal Reaction - Subfertility Risk (IAR) - n/n, iar/n		FKBP6IAR1, FKBP6IAR2	Not Affected 1 variant detected
SKIN, HOOF AND CONNECTIVE TISSUE DISORDERS:			
Hereditary Equine Regional Dermal Asthenia (HERDA) - n/n		PPIB	Negative 0 variants detected

SAMPLE ID: 071321_044/20210518-111538-3188

Genetic profile test results

Junctional Epidermolysa Bullosis type 1 (JEB1) - n/n	 LAMC2	Negative 0 variants detected
Junctional Epidermolysa Bullosis type 2 (JEB2) - n/n	 LAMA3	Negative 0 variants detected
"Warmblood" Fragile Foal Syndrome (FFS)	PLOD1	Not ordered
Hoof Wall Separation Disease (HWSD)	SERPINB11	Not ordered
Naked Foal Syndrome (NFS)	st14nfs	Not ordered
OCCULAR DISORDERS:		
Equine Recurrent Uveitis Susceptibility Risk (ERUR)	BIEC2536712WB	Not ordered
Equine Recurrent Uveitis Symptom Severity (ERUS)	BIEC2421990WB	Not ordered
Squamous Cell Carcinoma Susceptibility Risk (SCC)	DDB2	Not ordered
SKELETAL DISORDERS:		
Dwarfism (D)	ACAND1, ACAND2, ACAND3, ACAND4, ACAND5	Not ordered
Friesian Dwarfism (FD)	B4GALT7	Not ordered
Lordosis	 ECA20, ECA20,	Not detected

SAMPLE ID: 071321_044/20210518-111538-3188

Genetic profile test results



ECA20, ECA20

3 variants detected

ENDOCRINE DISORDERS:

**Equine Metabolic
Syndrome
Susceptibility Risk
(EMS)**

BIEC2263524EMS

Not ordered

**Laminitis
Susceptibility Risk -
Equine Metabolic
Syndrome related
(LAM)**

BIEC2263524_LAM

Not ordered

ADDITIONAL TRAITS:

Height (LCORL)


LCORL

Not ordered


Genetic profile test results

Performance and Abilities


GAIT TYPE:

Non-"Gaited" DMRT3  **DMRT3** **Detected**
 0 variants detected

PERFORMANCE:

Sprint  **MSTN** **Detected**
 2 variants detected

TEMPERAMENT:

Curious  **DRD4** **Detected**
 2 variants detected

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General information

Allele:

One of two or more alternative forms of a gene that arise by mutation and are found at the same place on a chromosome.

Alleles. Heterozygous vs. Homozygous:

Allele calls are written in a way that denotes their origin and whether they are DOMINANT (uppercase) or recessive (lowercase). For example, at MC1R (also known as extension), Black is dominant and thus written as "E" whereas Red is recessive and thus denoted as "e". Therefore, an EE horse is homozygous for Black (and thus appears black), an ee horse is homozygous for Red (appears Red), and an Ee horse is heterozygous (shows the dominant allele, thus is Black).

Gene:

A unit of heredity that is transferred from a parent to offspring and is thought to determine some characteristic of the offspring.

Genotype:

The genetic constitution or make up of an individual organism.

Heterozygous:

A pair of genes which are different (not the same). One is typically dominant and one recessive.

Homozygous:

A pair of genes that are identical (of one type).

Phenotype:

The observable or visible characteristics of an individual resulting from their genotype or the interaction of their various genes and environment.