



Genetic Profile Test Results

HORSE ID: 030519 021

Horse: Peppy Sanstreke

PACK: APHA

Owner: Laura Roba

Horse and Owner Information

Horse	Peppy Sanstreke	DOB	2007-05-29
Breed	American Paint Horse	Age	11 years, 10 months
Color	Bay	Sex	stallion
Discipline	Unknown	Height
Registry	American Paint Horse Association	Reg Number	908532
Sire	TRIPLE TROUBLE STREKE	Dam	MISS FALLINGSTARLYNX
Sire Reg & No.	American Paint Horse Association 772650	Dam Reg & No.	American Paint Horse Association 742762
Comments	Description: Tobiano		

Owner	Laura Roba	Address	Piazza Oscar Molinari 33
Phone	0039 3423395236	City, State	Cortemilia, CN
Email	phcitalia@gmail.com	Postal Code	12074



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Results Summary

Coat Color: Peppy Sanstreke has one Red allele and one Black allele, indicating the base coat color appears Black. Two copies of the Dominant Agouti allele were detected; invisible on a Red base, it pushes/restricts Black out to points; legs, ear tips, etc. appearing Bay. Two Tobiano alleles detected which may result in White markings. As a result of the allele count in each of the following, he has a minimum 50% chance of passing Red or Black, and 100% Dominant Agouti and Tobiano to any offspring.

Allele Summary: **AA, Ee, TO/TO**
Myostatin: Sprint Type

6-Panel: HYPP n/n, PSSM1 n/n, MH n/n, GBED n/n, HERDA n/n, LWO n/n

Traits: Peppy Sanstreke has not tested positive for any recessive disease alleles on this panel.

Please note: Your analysis is ongoing and may include some regions marked with an asterisk denoting the following.
* Discovery - This gene detection is in the early stages of discovery and will have varying reliability results.
** Inconclusive - Not a bad omen! Simply put, the gene of interest did not reveal itself (neither a positive nor a negative; no result, therefore unknown).



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Coat Color Results

Base

Agouti	+/+	ASIP	AA - Two dominant Agouti alleles detected; restricts any Black base to appear Bay.	More about A
Black/Red	+/-	MC1R	Ee - One Black allele detected and one Red.	More about E

Modifier

Brindle/IP	-/-	IKBK	No Brindle/IP alleles detected.	More about IP
Grey	-/-	STX17A	No Grey alleles detected.	More about G

Dilution

Champagne	-/-	SLC36A1	No Champagne alleles detected.	More about CH
Cream	-/-	SLC45A2	No Cream alleles detected.	More about CR
Dun	-/-,-/-	TBX3	nd2/nd2 (non-dun). Two non-dun2 alleles detected. No Dun or non-Dun Primitive Marking alleles detected.	More about Dun
Pearl	-/-	SLC45A2	No Pearl alleles detected.	More about prl
Silver	-/-	PMEL17	No Silver alleles detected.	More about Z



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Coat Color Results, continued

White Patterns Results

Dominant White	-/-	<i>KIT</i>	No Dominant White alleles detected (DW1-21).	More about DW
Frame Overo (LWO)	-/-	<i>EDNRB</i>	No Frame Overo (LWO) alleles detected.	More about LWO
Leopard Complex Spotting (LP)	-/-	<i>TRPM1</i>	No Leopard Complex Spotting (LP) alleles detected.	More about LP
Pattern 1 (LP modification)	-/-	<i>RFWD3</i>	No Pattern 1 (LP modification) alleles detected.	More about PATN1
Splashed White (MITF)	-/-,-/-	<i>MITF</i>	No Splashed White 1 nor Splashed White 3 alleles detected.	More about SW (MITF)
Splashed White (PAX3)	-/-,-/-	<i>PAX3</i>	No Splashed White 2 nor Splashed White 4 alleles detected.	More about SW (PAX3)
Sabino 1	-/-	<i>KIT</i>	No Sabino 1 alleles detected.	More about SB1
Tobiano	+/+	<i>ECA3</i>	TO/TO - Two Tobiano alleles detected.	More about TO



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Health Genetics 1

Immune System

Foal Immunodeficiency Syndrome	-/-	SLC5A3	No Foal Immunodeficiency Syndrome alleles detected.	More about fis
Severe Combined Immunodeficiency	-/-	DNAPK	No Severe Combined Immunodeficiency alleles detected.	More about scid
West Nile*	-/-	OAS1	Normal susceptibility to West Nile Virus symptoms.	More about WNVR*

Muscle Disorders

Glycogen Branching Enzyme Deficiency	-/-	GBE1	No Glycogen Branching Enzyme Deficiency alleles detected.	More about gbed
Hyperkalemic Periodic Paralysis	-/-	SCN4A	No Hyperkalemic Periodic Paralysis alleles detected.	More about HYPP
Malignant Hyperthermia	-/-	RYR1	No Malignant Hyperthermia alleles detected.	More about MH
Myotonia	-/-	CLCN4	No Myotonia alleles detected.	More about myt
Polysaccharide Storage Myopathy (type 1)	-/-	GYS1	No Polysaccharide Storage Myopathy (type 1) alleles detected.	More about PSSM1



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Health Genetics 2

Neurologic Disorders

Cerebellar Abiotrophy	-/-	<i>MUTYH</i>	No Cerebellar Abiotrophy alleles detected.	More about ca
Lavender Foal Syndrome	-/-	<i>MYO5A</i>	No Lavender Foal Syndrome alleles detected.	More about lfs

Reproductive Disorders

Androgen Insensitivity	-/-	<i>AR</i>	No Androgen Insensitivity alleles detected.	More about as
IAR - Subfertility*	-/-,-/-	<i>FKBP6</i>	No IAR Subfertility* alleles detected.	More about iar*

Skin Disorders

Hereditary Equine Regional Dermal Asthenia	-/-	<i>PPIB</i>	No Hereditary Equine Regional Dermal Asthenia alleles detected.	More about herda
Junctional Epidermolysa Bullosis (type 1)	-/-	<i>LAMC2</i>	No Junctional Epidermolysa Bullosis (type 1) alleles detected.	More about jeb1
Junctional Epidermolysa Bullosis (type 2*)	-/-	<i>LAMA3</i>	No Junctional Epidermolysa Bullosis (type 2*) alleles detected.	More about jeb2*



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Other Genetics

Trait Genetics

Lordosis*	-/-,-/+,+/-,-/-	ECA20	No pattern of Lordosis* alleles detected.	More about L*
Curiosity/Vigilance*	+/+	DRD4	Two Curiosity alleles detected; likely more curious than vigilant.	More about Cur/Vig
Myostatin/Speed	+/+	MSTN	Two Sprint alleles detected; likely Sprint ability over Endurance.	More about MSTN
Gait	-/-	DMRT3	No Gait alleles detected.	More about Gaited

New Additions for 2019

Equine Recurrent Uveitis (Risk)*	***	ECA18	***DNA Minipanel PLUS only, inquire about upgrade.	More about ERU
Equine Recurrent Uveitis (Severity)*	***	ECA20	***DNA Minipanel PLUS only, inquire about upgrade.	More about ERU
Equine Metabolic Syndrome*	***	FAM174A	***DNA Minipanel PLUS only, inquire about upgrade.	More about EMS
Laminitis Risk*	***	FAM174A	***DNA Minipanel PLUS only, inquire about upgrade.	More about LAM
Squamous Cell Carcinoma*	***	DDB2	***DNA Minipanel PLUS only, inquire about upgrade.	More about SCC
Tiger Eye*	***	SLC24A5	***DNA Minipanel PLUS only, inquire about upgrade.	More about Tiger Eye
Dwarfism*	***	ACAN	***DNA Minipanel PLUS only, inquire about upgrade.	More about Dwarfism



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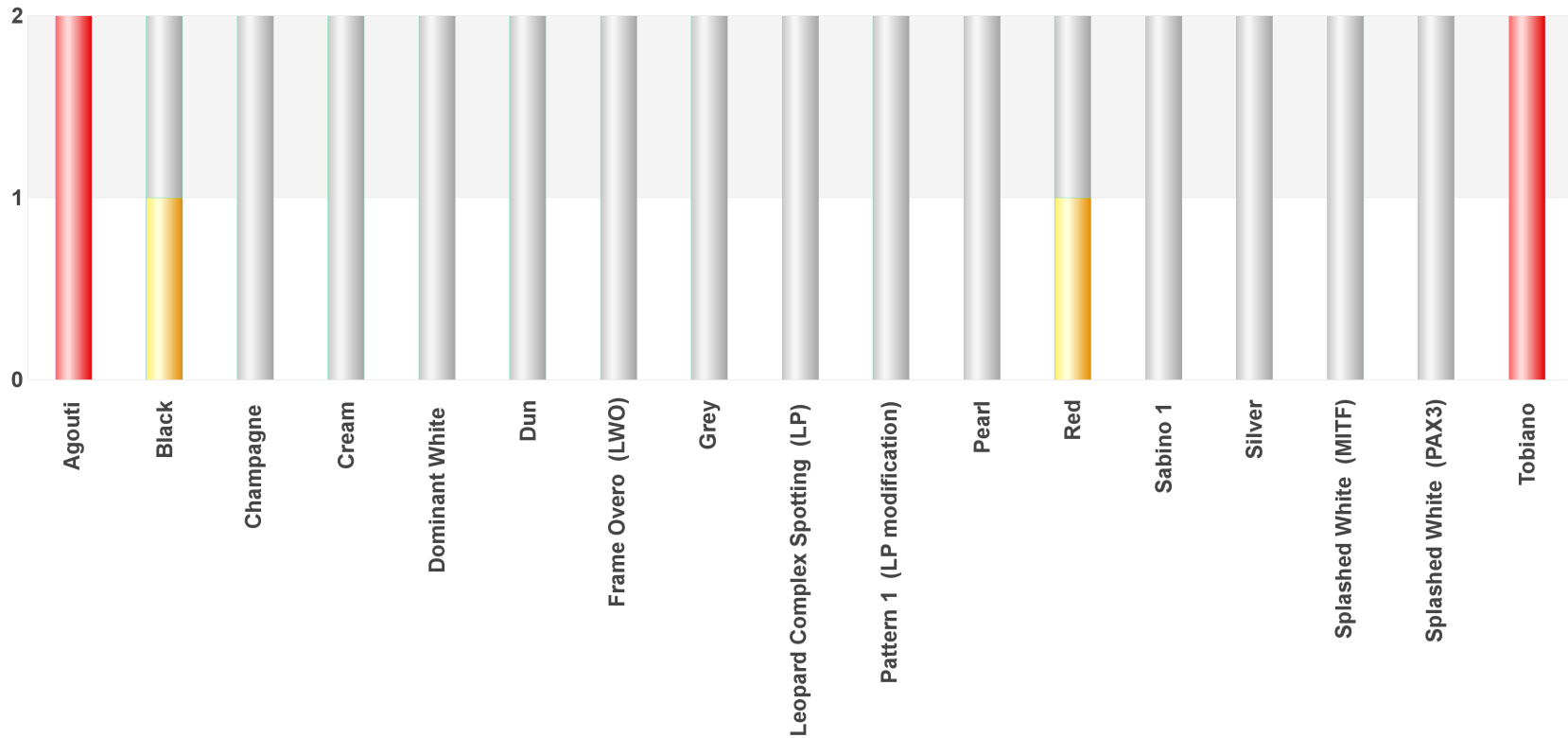
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Inheritance Probabilities

Coat Color



Coat Color Inheritance Probabilities: The bar graph above depicts the number of alleles for specific coat color phenotypes based upon your horse's genetic testing results. Completely filled red bar represents two such alleles (homozygous) and a half-filled yellow bar represents one such allele (heterozygous).



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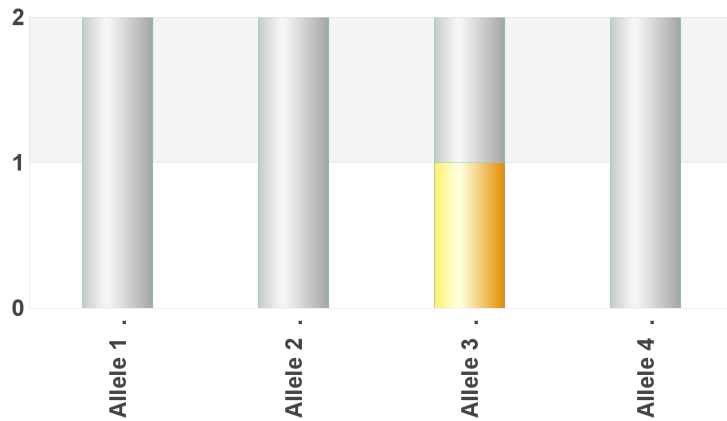
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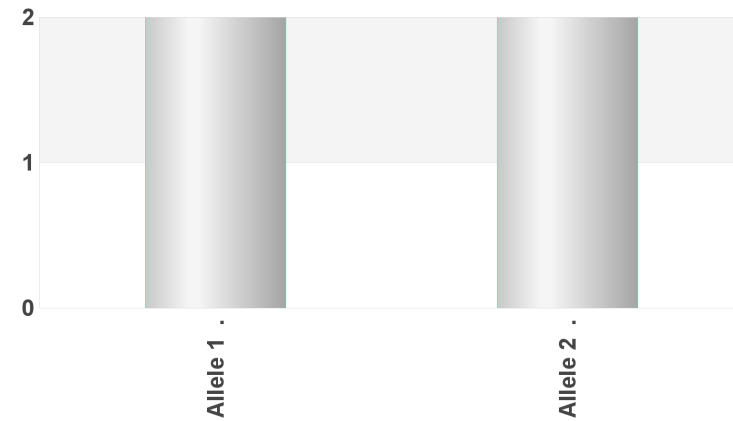
Inheritance Probabilities

Lordosis



Not affected

IAR Subfertility*



Not affected

Multi-allele Risk Charts: Each chart represents a trait, and each bar indicates a distinct risk or allele presence. These act in combination to produce the trait. A red bar indicates the horse carries 2 risk alleles at the site; a partly-yellow bar indicates 1 risk allele; and a fully-grey bar indicates 0 risk alleles. If all bars are red, then the horse carries two risk alleles at each risk site and is likely affected. If all bars contain yellow or red, but are not all red, then the horse is likely a carrier. Otherwise, the horse is not a likely carrier of the tested trait.



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Defining Genetics & More Info

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.

The results depicted in this report do not constitute veterinary or medical advice. Any medical or veterinary advice should be sought from your veterinarian regarding these results or any health issues or questions you may have about your animal. Breed, sex, gene interaction, unknown genes and individual variances may impact the results, phenotypes, and behaviors in any animal in unknown and unpredictable ways. Please be advised that your animals' health is important to us and you should feel free to contact us should you have any further questions or feedback on our diagnostic platform, results reporting, or general questions. We value your input and thank you!