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AQHA GENETIC DISEASE PANEL TEST RESULTS

AMERICAN QUARTER HORSE ASSOCIATION P.O. BOX 200 AMARILLO, TX 79168-0001	Case: QHA109710 Date Received: 27-Aug-2013 Report Date: 09-Oct-2013 Report ID: 2029-6118-6436-8140 Verify report at https://www.vgl.ucdavis .
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Horse: KIT KAT SUGAR YOB: 08 Breed: QH Sex: S Alt. ID: 6044971	Reg: 5157691
Sire: HIGH BROW CAT Dam: SUGAR N DULCE	Reg: 2706274 Reg: 4333746

GBED	N/N	N/N - Normal - Does not possess the disease-causing GBED gene
HERDA	N/N	N/N - Normal - horse does not have the HERDA gene
HYPP	N/N	N/N - Normal - Does not possess the disease-causing HYPP gene
MH	N/N	N/N - Normal - horse does not have the MH gene
PSSM1	N/N	N/N - Normal - horse does not have the PSSM1 gene

GBED - Glycogen Branching Enzyme Deficiency. Fatal disease of newborn foals caused by defect in glycogen storage. Affects heart and skeletal muscles and brain. Inherited as recessive disease.

HERDA - Hereditary Equine Regional Dermal Asthenia. Skin disease characterized by hyperextensible skin, scarring, and severe lesions along the back of affected horses. Typical onset is around 2 years of age. Inherited as a recessive disease.

HYPP - Hyperkalemic Periodic Paralysis. Muscle disease caused by defect in sodium channel gene that causes involuntary muscle contraction and increased level of potassium in blood. Inherited as dominant disease. Two copies of defective gene produce more severe signs than one copy.

MH - Malignant Hyperthermia. Rare but life-threatening skeletal muscle disease triggered by exposure to volatile anesthetics (halothane), depolarizing muscle relaxants (succinylcholine), and stress. Presumed inheritance as dominant disease.

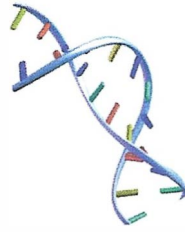
PSSM1 - Polysaccharide Storage Myopathy Type 1. Muscle disease characterized by accumulation of abnormal complex sugars in skeletal muscles. Signs include muscle pain, stiffness, skin twitching, sweating, weakness and reluctance to move. Inherited as a dominant disease.

GBED testing performed under a license agreement with the University of Minnesota.

HERDA testing performed under a license agreement with the University of California, Davis.

PSSM1 testing performed under a license agreement with the American Quarter Horse Association.

Equine Genetic Testing Report



Subject Horse		Date Received: 1/10/2022
Horse Name: Kit Kat Sugar	Lab Reference #: 00162093	
Breed: Quarter Horse	Registration: 5157691	
Phenotype:	Birth: 2008	
Sex: Stallion		

Sire	Dam
Sire Name:	Dam Name:
Breed:	Breed:
Registration:	Registration:
Phenotype:	Phenotype:

Coat Color and Pattern Testing	
Tobiano	Not Tested
Frame Overo	Not Tested
Sabino 1	Not Tested
Splashed White 1	Not Tested
Splashed White 2	Not Tested
Splashed White 3	Not Tested
Appaloosa (LP)	Not Tested
PATN1	Not Tested
Red/Black Factor	Not Tested
Agouti	Not Tested
Cream Dilution	Not Tested
Dun Dilution	Not Tested
Silver Dilution	Not Tested
Champagne	Not Tested
Pearl Dilution	Not Tested
Gray	Not Tested

Genetic Disorders	
HYPP	Not Tested
HERDA	Not Tested
GBED	Not Tested
MH	Not Tested
X IMM	N/N Horse tested negative for the mutation associated with IMM.
PSSM 1	Not Tested
FIS	Not Tested
JEB1	Not Tested
JEB2	Not Tested
CA	Not Tested
LFS	Not Tested
SCID	Not Tested
OAMM1	Not Tested
WFFS1	Not Tested

Additional Comments
None

Genetic Marker Results						Run Date: Not Tested
-	-	-	-	-	-	-
AHT4	AHT5	ASB17	ASB2	ASB23	AME	CA425UK
-	-	-	-	-	-	-
HMS3	HMS6	HMS7	HTG10	HTG4	LEX3	LEX33
-	-	-	-	-	-	-
VHL20	UM011	HMS1	HMS2	HTG6	HTG7	