Figure 2

GENES FOR COAT COLOUR IN THE HAVANESE

"A" gene – AGOUTI – How should I put it?

Controls dark colour patterning

A^y Sable | a^w Agouti | a^{st} Saddle Tan | $a^t a^t$ Black & Tan

"B" gene – Will it be black or brown?

Decides dark pigment colour (incl. nose & eyes)

BB or Bb Black | bb Chocolate

"C" gene – Should I filter Red?

Acts like a filter controlling development of light coat

C | c^{ch} | c^e

Red > Gold > Champagne > Cream > White

No filtering → filters some → filters most

"D" gene – DILUTION - Should I dilute it?

Decides whether to dilute dark colour intensity

Dominant [D] gives intense colour to coat/nose/eyes

BB dd or Bb dd Dilute Black (blue) | bbdd Dilute Chocolate

"E" gene – EXTENSION – To Be or Not To Be

Controls dark pigment production and decides IF any will be made (deposited where A tells it to)

E^m Mask | E Solid Dark | ee Clear

"G" gene – GRAYING

Prematurely grays dark colour coat over time, replacing coloured hair with silver, white or colourless hair

GG or Gg Graying | gg No Graying

"K" gene – BLACK

Controls expression of dominant black

K Dominant Black (No A expression) | k^{br} Brindle | k Normal (allows Full A expression)

"V" gene – SILVER – Should I filter black?

Acts like a filter controlling development of dark coat

v v Black | v V Charcoal(dark Silver) | V V Silver

No filtering → filters some → filters most

"S" gene – WHITE SPOTTING – Where should I allow the colour?

Decides how much of the body will be coloured or masked with white

SS	S s^i	s^i s^i	s^i s^p	s^p s^p	s^w s^w
Solid colour – No White at all or only In minute amounts	Solid colour with bit of white on chest, feet or tail tip	Irish Pied >50% colour also S s^p	Close to 50:50 colour / white also S sw	Classic Parti or Piebald >50% white	Extreme Piebald Mostly white minimal colour

"T" gene – TICKING

Decides if the white coat will be flecked with colour

TT or T t Ticking | t t No Ticking

"M" gene – MERLE

May or may not be a factor in Havanese. Has not been positively identified but is theoretically possible. Merle dilutes colour in patches, giving a marbled mottled coat, also affecting eye and nose colour. Doubled Merle genes in other breeds often produce health issues.