

GENES FOR COAT COLOURS IN THE HAVANESE

"A" gene – AGOUTI

Determines coat patterning by controlling the expression and layout of dark coat colour and light coat colour



A^y a^w a^{st} $a^t a^t$

Sable > Agouti (wild) > Saddle Tan > Black & Tan

"E" gene – EXTENSION

Controls whether or not any dark pigment will be produced, colour deposited according to "A" instructions



E^m E $e e$

Mask Solid dark Clear

"B" gene – BLACK or BROWN

Determines dark base colour whether it will be black or brown. (Affects nose and leather as well as coat)



$B B$ or $B b$ bb

Black Brown

"G" gene – GREYING

Determines whether or not there will be any premature greying of dark coat colour

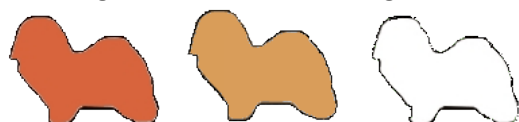


$G G$ or $G g$ gg

Premature greying no greying

"C" gene – CHINCHILLA

Acts like a filter controlling the development of red pigment in light coat. Determines degree of intensity



C c^{ch} c^e

Red > Gold > Champagne > Cream > White

"K" Gene – BLACK

Controls expression of dominant black and whether or not expression of A will be overridden or allowed



K k^{br} k

Dominant (no A expression) Brindle Normal (allows A expression)

"D" gene – DILUTION

Determines whether dark colour will be diluted or not
Affects nose/leather and eye colour as well as coat



$BB dd$ or $Bb dd$ $bb dd$

Dilute black (Blue) Dilute chocolate

"V" gene – SILVERING

Acts like a filter controlling the development of dark pigment in black/brown coats. Determines colour intensity



$V V$ $V v$ $v v$

Silver Dark silver (charcoal) Black

"S" gene – WHITE SPOTTING

Decides how much of the body will be coloured and how much will be masked with white
Determines degree of white spotting from none all the way to extreme. Categories overlap each other.



SS $S s^i$ $s^i s^i$ $S s^p$ $s^i s^p$ $s^p s^p$ $S s^w$ $S^i s^w$ $s^p s^w$ $s^w s^w$

Solid > white trim > Irish pied > 50/50 > particolour > light marked particolour > piebald > extreme piebald

"T" gene – TICKING

Determines whether or not any areas of white coat will be ticked or flecked with colour (Belton)



$T T$ or $T t$ $t t$

Ticked coat No ticking

Note: The dark colour can be black or brown in any of the above. The black variations are shown here but all could exist with brown as well. There may be Chocolate & tan, Chocolate sable, Chocolate brindle, Chocolate silver, Dilute chocolate, Chocolate & white and Chocolate belton etc.