



Every Poodle Colour Locus at a Glance

All ten colour loci, and the four rules that prevent most mistakes

Locus	Gene	Alleles	What it does	Test?
E	MC1R	E-series, e	Eumelanin on/off; ee = red spectrum	Yes
K	CBD103	KB, kbr, ky	KB solid (masks A); ky lets A show	Yes
A	ASIP	DY SY AG BS BB a	Sable / agouti / phantom pattern	Yes
B	TYRP1	B, b	Black vs brown eumelanin	Yes
D	MLPH	D, d	dd dilutes (blue, lilac); born dilute	Yes
M	PMEL	m ... Mh (7, by length)	Merle; two copies = health risk	Yes
S	MITF	S, sp	Parti; dosage-dependent	Yes
G	Unidentified	G, g (inferred)	Progressive greying; clears with age	NO
R	USH2A	3 haplotypes	Roan / ticking in white areas	Part
I	Polygenic	KITLG, GPR22-linked	Red / apricot / cream depth	No

Hold these four in mind

- Brown, never chocolate. Chocolate is not a poodle colour.
- Greying (G) and red-spectrum shade are observed from the dog, not predicted from a test.
- ee masks all coat pattern (including merle); KB masks the A locus. The alleles are still present and passed on.
- Café-au-lait / silver beige are greying on brown. bb + dd is lilac. Different mechanisms, different dogs.
- A dd (true blue/lilac) dog carries a documented risk of colour dilution alopecia (progressive coat thinning). No poodle-specific rate is published; thinning past a year old is worth a vet visit.
- B locus sub-variants (ba, bd, bs, and others named by some labs) are all independent loss-of-function TYRP1 changes - any combination still produces an ordinary brown dog.

THE TWO MASKERS - CHECK THESE FIRST

- ee (red spectrum) hides every colour pattern, including merle. Test before assuming solid.
- KB hides the whole A locus - no phantom, sable or agouti will show on a KB dog.
- A hidden allele is still inherited. "Not shown" never means "not there."

THE POODLE GENETICS LAB REFERENCE SET

E & B Loci - Merle Health Risk - Phantom Matrix - Silver & Blue - Parti Planner - Full Loci Card
Full guides, the calculator and sources at poodlegenetics.com/genetics-guide