

Red Intensity & Fading Reference

ee is one genotype and a whole spectrum - shade is read from the adult dog, never a panel

ee: one genotype, a whole spectrum

Every red, apricot and cream poodle is e/e at the E locus - eumelanin is off, and only phaeomelanin (the red/yellow pigment) remains. Where that dog sits between deep red and pale cream is a separate, polygenic trait riding on top of the E-locus switch.

- Known contributors include a KITLG copy-number variant and a GPR22-linked variant. Others are not yet identified.
- No test predicts adult shade from puppy coat. Be sceptical of any panel selling an "intensity" result as I/I or i/i - it is ahead of the science.

KITLG: a real, partial piece - not a test

A 2020 UC Davis study found copy number near KITLG tracks pigment depth on both the red side and the black side of the coat (red poodles: median 8 copies vs cream median 3, $p = 4.0 \times 10^{-9}$; black: median 6 vs light grey median 2, $p = 1.5 \times 10^{-8}$). No commercial lab tests this variant, and it explains part of the picture, not all of it.

Two "fade" mechanisms - do not confuse them

Mechanism	Pattern and timing
Intensity clearing (usual)	Smooth, overall lightening toward apricot or cream. Typically resolves by 12-18 months, after which colour is stable.
Progressive greying (different mechanism)	Acts on eumelanin, not phaeomelanin - a genuinely e/e dog has no coat eumelanin to grey. Pattern and timing differ from intensity clearing; check the pedigree.

Not every fade is the same fade

A dog you believe is deep red may still carry more going on than the coat shows, and lines that carry greying can produce complicated cases. The tell is pattern: a smooth, overall lightening points to intensity; anything else is worth checking against the pedigree.

WHAT ACTUALLY WORKS

- Select breeding stock on the adult coat (18 months or later), never the puppy coat - the puppy coat over-promises.
- Look at the whole family - siblings, parents, produced offspring - not just the individual. Intensity is the sum of many small-effect genes.
- Breed depth to depth, consistently. There is no single mating that fixes intensity in one generation.
- Tell buyers plainly: a deep red puppy will likely clear somewhat toward apricot as an adult.

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