



Phantom: The A x K Locus Grid

Two loci must agree - the A locus supplies the pattern, the K locus lets it show

Phantom needs two loci to line up. The A locus supplies the tan-point pattern; the K locus must allow it to show. Get either wrong and there is no phantom.

The rules that trip people up

- Phantom needs kyky at K. A single KB masks the A locus entirely - a KB dog is solid whatever its A genotype.
- The phantom haplotype is BB (black back; legacy at). It does NOT need two copies: at is dominant over a, so an at/a dog is a phantom.
- BS (black saddle) is the likely basis of creeping tan (not yet confirmed in poodles), not the classic phantom - the markings recede to a saddle with age. Legacy at covers BOTH BB and BS.

A x K grid

A locus (legacy)	with KB _	with ky ky
at/at (BB/BB)	Solid (masked)	Phantom
at/a (BB/a)	Solid (masked)	Phantom
Ay/at (sable over at)	Solid (masked)	Sable (Ay dominates)
a/a (recessive black)	Solid (masked)	Recessive black

ee hides it too

An ee dog (red/apricot/cream) shows no phantom regardless of A and K - there is no eumelanin to pattern. It still carries and passes the phantom genetics on.

The base colour of the points and body is then set by B (black vs brown), D (dilution) and G (greying). See the E & B and Silver & Blue cards.

IF A PHANTOM DID NOT APPEAR

- Check K first. A single KB masks the A locus - the dog is solid whatever its A genotype.
- at/a still shows phantom. You do not need two copies of at.
- Markings creeping to a saddle with age? That is likely BS (probable creeping tan), not a marking fault.

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