

DERMATOMYOSITIS

Results of Various Breeding Combinations for a Dog with **AABB** Genotype

Red are risk alleles, **blue** are "wild type," normal alleles.

(Punnett squares provided courtesy of the Clark Canine Genetics Research Laboratory, Clemson University.
<http://www.clemsoncaninegenetics.com/>)

AABB	
AB AB AB AB	
ab	AaBb AaBb
ab	AaBb AaBb
ab	AaBb AaBb
ab	AaBb AaBb
16 AaBb	

All low risk with homozygous or heterozygous *DLA-DRB1*002:01*

AABB	
AB AB AB AB	
Ab	<u>AABb</u>
ab	<u>AaBb</u>
Ab	<u>AABb</u>
ab	<u>AaBb</u>

8 AABb: 8 AaBb

8 low risk: **AaBb with homozygous or heterozygous *DLA-DRB1*002:01***

0-8 moderate risk: **AABb with heterozygous *DLA-DRB1*002:01***

0-8 high risk: **AABb with homozygous *DLA-DRB1*002:01***

(Each pup has a 50% chance of inheriting low risk and 50% chance of moderate or high risk genotype.)

		AABB			
		AB	AB	AB	AB
<u>aaBb</u>	<u>aB</u>	<u>AaBB</u>	<u>AaBB</u>	<u>AaBB</u>	<u>AaBB</u>
	<u>ab</u>	<u>AaBb</u>	<u>AaBb</u>	<u>AaBb</u>	<u>AaBb</u>
	<u>aB</u>	<u>AaBB</u>	<u>AaBB</u>	<u>AaBB</u>	<u>AaBB</u>
	<u>ab</u>	<u>AaBb</u>	<u>AaBb</u>	<u>AaBb</u>	<u>AaBb</u>
		8 <u>AaBB</u>: 8 <u>AaBb</u>			

8 low risk: **AaBb with homozygous or heterozygous *DLA-DRB1*002:01***

0-8 moderate risk: **AaBB with heterozygous *DLA-DRB1*002:01***

0-8 high risk: **AaBB with homozygous *DLA-DRB1*002:01***

		AABB			
		AB	AB	AB	AB
<u>AaBb</u>	AB	AABB	AABB	AABB	AABB
	<u>Ab</u>	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>
	<u>aB</u>	<u>AaBB</u>	<u>AaBB</u>	<u>AaBB</u>	<u>AaBB</u>
	<u>ab</u>	<u>AaBb</u>	<u>AaBb</u>	<u>AaBb</u>	<u>AaBb</u>

4 AABB: 4 AABb: 4 AaBB: 4 AaBb

4 low risk: AaBb with homozygous or heterozygous *DLA-DRB1*002:01*

0-8 moderate risk: 0-4 AABb, 0-4 AaBB with heterozygous *DLA-DRB1*002:01*

4-12 high risk: 4 AABB with homozygous or heterozygous *DLA-DRB1*002:01*

0-4 AABb, 0-4 AaBB with homozygous *DLA-DRB1*002:01*

AABB	
AB AB AB AB	
<u>aB</u>	<u>AaBB</u>
<u>aB</u>	<u>AaBB</u>
<u>aB</u>	<u>AaBB</u>
<u>aB</u>	<u>AaBB</u>
16 <u>AaBB</u>	

0-16 moderate risk: **AaBB** with heterozygous *DLA-DRB1*002:01*

0-16 high risk: **AaBB** with homozygous *DLA-DRB1*002:01*

		AABB			
		AB	AB	AB	AB
<u>AAbb</u>	Ab	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>
	Ab	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>
	Ab	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>
	Ab	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>	<u>AABb</u>
		16 <u>AABb</u>			

0-16 moderate risk: **AABb** with heterozygous *DLA-DRB1*002:01*

0-16 high risk: **AABb** with homozygous *DLA-DRB1*002:01*

AABB

*AB**AB**AB**AB**AB*

AABB

AABB

AABB

AABB

*Ab*AABbAABbAABbAABbAABb*AB*

AABB

AABB

AABB

AABB

*Ab*AABbAABbAABbAABb8 AABB: 8 AABb0-8 moderate risk: **AABb with heterozygous *DLA-DRB1*002:01***8-16 high risk: **8 AABB with homozygous or heterozygous *DLA-DRB1*002:01*****0-8 AABb with homozygous *DLA-DRB1*002:01***

AABB	
<i>AB</i> <i>AB</i> <i>AB</i> <i>AB</i>	
<i>AB</i>	AABB
<i>aB</i>	<u>AaBB</u>
<i>AB</i>	AABB
<i>aB</i>	<u>AaBB</u>

8 AABB: 8 AaBB:

0-8 moderate risk: **AaBB with heterozygous *DLA-DRB1*002:01***

8-16 high risk: **8 AABB with homozygous or heterozygous *DLA-DRB1*002:01***

0-8 AaBB with homozygous *DLA-DRB1*002:01*

AABB

AB AB AB AB

AABB

AB	AABB	AABB	AABB	AABB
AB	AABB	AABB	AABB	AABB
AB	AABB	AABB	AABB	AABB
AB	AABB	AABB	AABB	AABB

16 AABB

All high risk with homozygous or heterozygous *DLA-DRB1*002:01*