Feline Infectious Peritonitis Resistance SENSOR

Certificate ID:	KLQJ-TJIH-A56G-QKDF-XFDT	**Sample received :**	9/28/2018
Sample ID:	B01 0510	**Date reported:**	10/12/2018

Animal		**Owner/Breeder**
Name:	Riva the Cosy One	Sonja Wirsing
Breed:	Sacred Birman	Boierstraße 2b
Sex:	female	92334 Berching-Pollanten
Birth certificate number:	/	Germany
Tattoo number:	/	sonjawirsing@gmx.de
Microchip number*:	/	
Registration number:	/	
Date of birth:	7/19/2018	

*Sample taken by owner.

Calculated risk of developing FIP from genotype of Riva the Cosy One is 0,10.
(Report Summary Table 1.)

This corresponds to 2,15% risk of developing FIP, which is 90% less than Sacred Birman cat population in general.
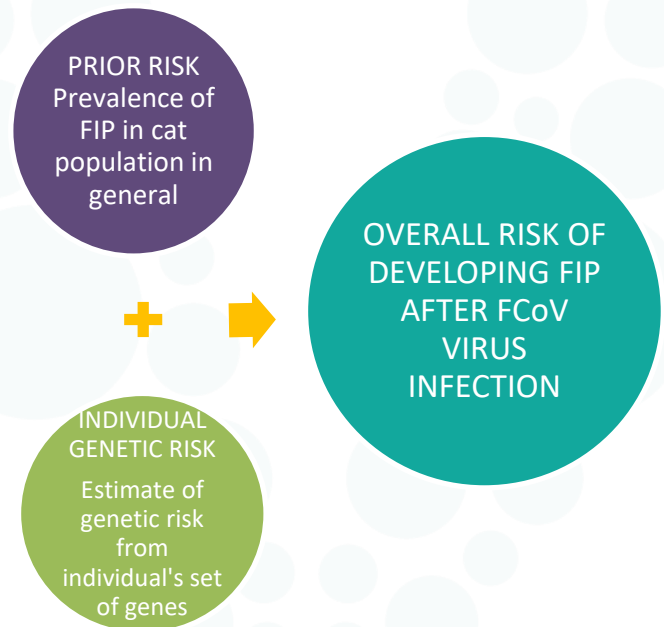(Report Summary Chart 1. and 2.)

Martina Šantek, M. Sc. Agr.
Laboratory Analyst

Understanding Feline Infectious Peritonitis Resistance SENSOR:

Feline infectious peritonitis resistance (FIPR) SENSOR determines an **overall risk or probability of developing FIP** combining the **prior probability** of developing the disease with **individual genetic risk**. Overall risk finally tells us if the cat is more resistant than the average cat population or at greater risk of developing FIP than the average population.

Prior probability of developing the disease represents prevalence of FIP in purebred cat population or specific cat breed. Since resistance to FIP is a complex health trait associated with multiple genomic loci, among which some loci have higher impact on overall result then other, **individual genetic risk** combines individual genetic associations to derive a composite, multilocus estimate of genetic risk.

PRIOR RISK
Prevalence of FIP in cat population in general

+

INDIVIDUAL GENETIC RISK
Estimate of genetic risk from individual's set of genes

OVERALL RISK OF DEVELOPING FIP AFTER FCoV VIRUS INFECTION

Results summary interpretation

Results summary consists of one table and two graphs. Table contains information about genotypes on each of the six loci tested, their impact on overall result (illustrated with number of stars) and the risk of individual's genotype compared to other two genotypes possible for that specific locus (illustrated with indicator; green=low, yellow=intermediate, red=high).

Chart 1. is an illustration of individual's overall risk of developing FIP compared to cat population of that specific breed in general. Yellow color represents average risk of developing FIP. Shift to green color represents greater resistance to FIP while shift to red color represents greater risk.

Chart 2. is an illustration of overall risk of developing FIP compared to prevalence of FIP in purebred cat population or specific cat breed.

References:
Hsieh, L.-E., and Chueh, L.-L. (2014). Identification and genotyping of feline infectious peritonitis-associated single nucleotide polymorphisms in the feline interferon-γ gene. Vet Res 45, 57.
Jewell, N. P. (2003). Statistics for Epidemiology. Chapman & Hall/CRC.
Pesteanu-Somogyi, L.D., Radzai, C., and Pressler, B.M. (2006). Prevalence of feline infectious peritonitis in specific cat breeds. J. Feline Med. Surg. 8, 1−5.
Risch, N. (1990). Linkage strategies for genetically complex traits. I. Multilocus models. Am. J. Hum. Genet. 46, 222−228.
Wang, Y.-T., Hsieh, L.-E, Dai, Y.-R., and Chueh, L.-L. (2014). Polymorphisms in the feline TNFA and CD209 genes are associated with the outcome of feline coronavirus infection. Vet. Res. 45, 123.

AnimaLabs ©

Knowledge beyond tomorrow

Name: Riva the Cosy One
Microchip number: /
Date of birth: 19.7.2018

Table 1. Table of genotypes on each of the six loci tested. Number of stars is a relative impact of each of the loci on overall risk. Indicator represents risk of your cat's genotype on each locus (green=low, yellow=intermediate, red=high)

Gene	Variant/SNP	Impact	Low Risk	Intermediate Risk	High Risk	Relative Risk	Result	Indicator
fIFNG	428	★★★★	TT	CT	CC	0,32	CT	🟡
fTNFA	421	★★★★★	TT	CT	CC	1,12	CC	🔴
FCD209	1900	★★★★★	GG	GA	AA	0,78	GG	🟢
FCD209	2276	★★★★★	TT	CT	CC	1,02	CC	🔴
FCD209	2392	★★★	AA	GA	GG	0,46	GA	🟡
FCD209	2713	★★★	CC	CT	TT	0,72	CC	🟢

Your cat vs. Birman

Calculated risk

Chart 1. Overall risk of developing FIP compared to purebred cat population in general. Yellow color represents average risk of developing FIP. Shift to green color represents greater resistance to FIP while shift to red color represents greater risk.

Chart 2. Overall risk of developing FIP compared to prevalence of FIP in purebred cat population or specific cat breed.

22,20%

1,30%

2,15%

PUREBRED   BIRMAN   YOUR CAT