



Lyme Borrelia Canine ELISA



Lyme disease (Borreliosis) is a tick-borne, bacterial disease of humans and domestic animals. It is caused by spirochetes of the *Borrelia burgdorferi sensu lato* group.

Borrelia are helically wound, flexible, highly motile bacteria. By rotation of their axial filaments (periplasmic flagella) they are able to move efficiently in corkscrew fashion through viscous media (serum). Therefore they can disseminate throughout the body within days to weeks of infection.



In Europe, the most frequently isolated pathogenic genospecies of humans and dogs are *Borrelia afzelii*, *Borrelia garinii* and *Borrelia burgdorferi sensu stricto*.

The pathogens are transmitted by various tick species of the genus *Ixodes*.

In Europe, *Ixodes ricinus* is the most important vector. However, infestation rates with *Borrelia* vary depending on the region. In endemic areas of Germany, approximately 3-7 % of the larvae and 10-34 % of nymphs and adult ticks are infected by *Borrelia burgdorferi sensu lato*.

The reservoir hosts of *Borrelia* are wild animals, including rodents as well as many other small mammals and birds. The ticks take their meals (blood) from these animals.

Since dogs visit the areas where ticks live, they are more affected than humans. Typical tick habitats are the edge of the woods, bushes, undergrowth and tall grass. However, infected ticks can also be found in public parks.

Symptoms of Lyme disease in dogs include fever, apathy, loss of appetite and anorexia as well as recurrent and shifting lameness and polyarthritis. The characteristic rash or the circular area of redness around the bite (erythema chronicum migrans) which is seen in man may be absent or perhaps overlooked due to hair coat or dark pigmentation.

Species	Disease	Symptoms	Mechanism of infection
<i>Borrelia burgdorferi sensu lato</i>	Lyme disease (Borreliosis)	fever apathy loss of appetite and anorexia recurrent and shifting lameness, polyarthritis	transmission by the bite of an infected tick: in Europe by <i>Ixodes ricinus</i>

Infections may be diagnosed by:

- Microscopy: direct detection and identification of the pathogen is possible but uncertain
- Culture: time-consuming and labour-intensive
- PCR
- Serology: determination of specific antibodies based on the ELISA-technique (screening) or Western-Blot (confirmatory test)

Lyme Borrelia Canine IgG - ELISA:

The NovaTec Lyme Borrelia Canine IgG - ELISA is intended for the qualitative determination of IgG-specific antibodies against *Borrelia burgdorferi* in canine serum.

Antigens:

VlsE (recombinant) and purified antigens from *B. burgdorferi*, *B. afzelii*, *B. garinii*

Specific performance characteristics:

	Intraassay			Interassay			Sensitivity %	Specificity %
	n	Mean	CV %	n	Mean	CV %		
IgG	23	1.95	2.0	12	59.2	3.6	93.3	> 95

Order information:

ELISA	Number of determinations	Product number
Lyme Borrelia Canine IgG	96	BORG0320V

▶ also available:

Borrelia burgdorferi Lyme Blot Canine IgG (Product number: LYGV0010)

Borrelia burgdorferi Lyme Blot Canine IgM (Product number: LYMV0010)