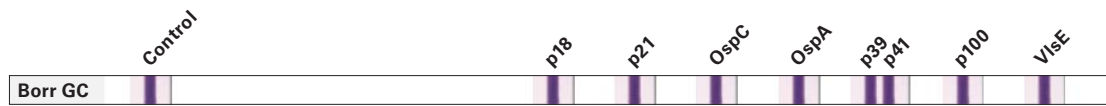




Anti-Borrelia EUROLINE Dog (IgG)



- Simultaneous detection of 7 different Borrelia-specific antibodies
- Differentiation between vaccine- and infection-derived antibodies
- Fully automated incubation and analysis possible

Technical data

Antigens	Highly specific recombinant antigens purified by affinity chromatography: p18, p21, OspC (p25), OspA (p31), p39, p41, p100, VlsE Bb
Sample dilution	Canine Serum or plasma, 1:51 in universal buffer
Test procedure	30 min / 30 min / 10 min, room temperature
Test kit format	16 or 32 membrane strips, kit includes all necessary reagents incl. a coloured conjugate for a better handling
Automation	Compatible with all commercial blot processing systems, e.g. EUROBlotOne or EUROBlotMaster from EUROIMMUN
Order no.	DN 2136-1601 GC or DN 2136-3201 GC
Related products	DN 2136-1601 MC or DN 2136-3201 MC: Anti-Borrelia EUROLINE Dog (IgM)

Clinical significance

In 1982 W. Burgdorfer found that ticks transmit "Treponema-like spirochaeta", which were later identified as the causative agent of Lyme borreliosis. Only two years later, in 1984, the disease was also described in dogs. The Gram-negative bacteria causing Lyme borreliosis are collectively referred to as Borrelia (*B.*) burgdorferi sensu lato. Among these, the genospecies Borrelia burgdorferi sensu stricto, Borrelia garinii and Borrelia afzelii are pathogenic for dogs. Whereas in the U.S. only *B. burgdorferi* sensu stricto is relevant, 80% of pathogens found in European ticks are *B. garinii* or *B. afzelii*.

The bacteria are transmitted to humans and animals by ticks of the Ixodes species. Dogs are at a higher risk due to their frequent contact with ticks. However, most of the infections in dogs are asymptomatic, and less than 5% of bites from infected ticks lead to clinical symptoms. The first symptoms of Lyme borreliosis in dogs are rather unspecific and include lethargy, loss of appetite and fever. Erythema migrans, which is typically found in humans, is not observed in dogs due to fur or dark skin. The first specific symptom in dogs is lameness due to myositis or arthritis, which generally occurs weeks or months after infection. Neurological impairments or damage to the kidneys (glomerulonephritis) or heart (myocarditis) are rarely described. Infection does not confer strong long-term immunity. Reinfection is therefore possible. Various vaccines are available for dogs. Specific antibodies against Borrelia burgdorferi can be found in the serum of infected or vaccinated dogs.

Application

For the serological detection of anti-Borrelia antibodies several studies call for a two stage strategy: a sensitive screening test, such as the EUROIMMUN Anti-Borrelia ELISA Dog (IgG) (order no. EI 2132-9601-2 GC) will identify practically all sera that react with Borrelia antigens. As a follow-up, the EUROIMMUN Anti-Borrelia EUROLINE Dog (IgG) provides a secure and sensitive differentiation between Borrelia-specific and non-specific reactions by using defined antigens as single bands.

It is recommended that IgG determination is supplemented by an analysis of Borrelia-specific antibodies of class IgM, for example using the Anti-Borrelia EUROLINE Dog (IgM) (order no. DN 2136-1601 MC). In this way, the serological detection rate for all stages of the disease can be further increased and acute infections may be differentiated from old infections.

IgG antibodies can be detected approximately 4 to 6 weeks after infection. One of the most important antigens in borreliosis diagnostics is VlsE (variable major protein [VMP] like sequence, expressed) a surface lipoprotein that is only expressed in vivo and is not contained in vaccines. Infected dogs show an early and strong IgG response to VlsE.

