

Datasheet for ABIN964722

anti-p39 antibody



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Overview

Quantity:	100 µg
Target:	p39
Reactivity:	Borrelia burgdorferi, Borrelia afzelii
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA

Product Details

Purpose:	p39 Antibody
Immunogen:	Immunogen: MBP-fusion protein corresponding to Borrelia burgdorferi p39 protein. Immunogen Type: Recombinant Protein
Isotype:	IgG
Cross-Reactivity (Details):	This antibody is specific for Borrelia burgdorferi p39 protein.
Characteristics:	Synonyms: rabbit anti-p39 Antibody, Basic membrane protein A, Borrelia burgdorferi bmpA, immunodominant antigen P39, membrane lipoprotein BmpA
Purification:	This product was Protein-A purified and cross-adsorbed against MBP from monospecific antiserum by chromatography.

Target Details

Target:	p39
Background:	Background: The p39 protein, or Basic membrane protein A, is one of the immunogenic cell

Target Details

membrane components of *Borrelia burgdorferi*, the spirochete carried by Ixodes ticks. The spirochete migrates from the tick midgut during feeding to its salivary glands and are thus transmitted to the mammal host. This transition may be facilitated by changes in expression of some *B. burgdorferi* genes. It is believed that expression of the various proteins associated with the spirochete may be regulated by the changes in tick life cycle, changes in conditions during tick feeding (such as temperature, pH , and nutrients) and/or in coordination with the course of infection of the mammal host. BmpA is expressed during the invasion of the spirochete and in the evolution of the arthritis of Lyme disease in mammals. It belongs to the BMP lipoprotein family. The major products of the *B. burgdorferi* basic membrane protein (bmp) A/B operon that are induced in murine and human joints possess inflammatory properties. Non-lipidated and lipidated versions of BmpA have been shown to induce the pro-inflammatory cytokine TNF- α and IL-1 β in human synovial cells. The induction of cytokine responses in synovial cells via activation of the NF-kappaB and p38 MAP kinase pathways could potentially contribute to the genesis of Lyme arthritis. The BmpA outer-surface protein is an important antigen for serodiagnosis of human infection. *B. burgdorferi* adheres to host extracellular matrix components, including laminin, but may not bind mammalian type I or type IV collagens or fibronectin.

Gene ID: 1195220

NCBI Accession: [WP_002656850](#)

UniProt: [Q45010](#)

Application Details

Application Notes: Application Note: This protein-A purified antibody has been tested for use in ELISA and Western blotting. Specific conditions for reactivity should be optimized by the user. Expect a band approximately 35.4 kDa in size corresponding to *Borrelia burgdorferi* p39 protein by Western blotting in the appropriate cell lysate or extract.

Western Blot Dilution: 1:1,000

ELISA Dilution: >1:5,000

Other: User Optimized

Restrictions: For Research Use only

Handling

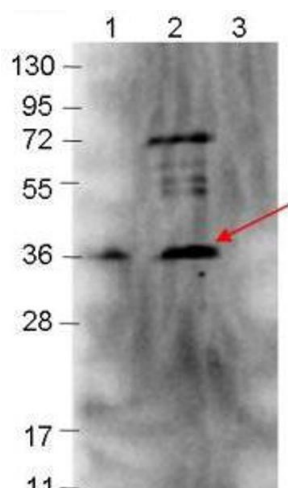
Format: Lyophilized

Handling

Reconstitution:	Reconstitution Volume: 100 µL Reconstitution Buffer: Restore with deionized water (or equivalent)
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

Product cited in:	Karvonen, Tammisto, Nykky, Gilbert: "Borrelia burgdorferi Outer Membrane Vesicles Contain Antigenic Proteins, but Do Not Induce Cell Death in Human Cells." in: Microorganisms , Vol. 10, Issue 2, (2022) (PubMed).
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Western Blotting

Image 1. Western blot showing detection of 0.1 μ g of recombinant p39 protein. Lane 1: Molecular weight markers. Lane 2: MBP-p39 fusion protein (expected MW: 77.8 kDa). Lane 3: MBP alone. Protein was run on a 4-20% gel, then transferred to 0.45 μ m nitrocellulose. After blocking with 1% BSA-TTBS, diluted to 1X) overnight at 4°C, primary antibody was used at 1:1000 at room temperature for 30 min. HRP-conjugated Goat-Anti-Rabbit secondary antibody was used at 1:40,000 in ABIN925618 blocking buffer and imaged on the MP 4000 imaging system (Bio-Rad).