Recombinant Borrelia burgdorferi sensu stricto (B31) Surface Lipoprotein P27, MBP-tagged

Cat. No. BOR-040 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	This is a recombinant Borrelia burgdorferi P27 protein, fused to an MBP-tag and produced in E. coli (>90% purity).
Tag	MBP
Background	Surface Liporotein P27 is encoded by the spirochete B. burgdorferi, which is carried by Ixodes ticks. Strain B31 is the type strain (ATCC 35210) for this organism and was derived by limited dilutional cloning from the original Lyme-disease tick isolate obtained by A. Barbour (Johnson, et al., 1984). Spirochetal outer surface proteins (Osps) play a major role in both protection from and pathogenesis of Lyme disease. All Osps (OspA to OspF and P27) have been shown to be lipoproteins, containing hydrophobic N-terminal domains and putative cleavage sites (Leu-X-Y-Z-Cys) thought to be recognized by a lipoprotein signal peptidase (Brandt, et al., 1990). The p27 gene is located on a linear plasmid of a size of approximately 55 kb and expressed as a basic protein of 248 amino acids with a typical prokaryotic leader sequence of 17 amino acid residues at the N-terminus of the proposed translation product, as confirmed by Northern and Western blot analysis (Reindl, et al., 1993). Borrelia spirochetes are unique among gram-negative (diderm or double-membrane) bacteria in their abundance of surface-displayed lipoproteins, some of which play important roles in the pathogenesis of Lyme disease and relapsing fever. There is evidence that Borrelia lipoproteins are specifically targeted to the bacterial surface, but that they can be retained in the periplasm by sequence-specific signals (Schulze

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	& Zückert, 2006).
Purity	>90% by SDS-PAGE
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 and 0.01% (w/v) Sodium Azide
Stability	At +4 centigrade: Not determined. At -80 centigrade: Not determined.
Freezing	Can be frozen, but avoid multiple freeze/thaw cycles.
Storage	Short Term Storage: +2 centigrade to +8 centigrade Long Term Storage: -80 centigrade
Concentration	1.0 mg/mL by UV absorbance at 280 nm
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant
ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	Borrelia burgdorferi sensu stricto (B31) Surface Lipoprotein P27

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