

## Recombinant *B. burgdorferi* BmpA Protein, MBP-tagged

**Cat. No.** BmpA-12B    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant <i>Borrelia burgdorferi</i> P39 protein produced in <i>E. coli</i> . Protein contains a MBP-tag and is visible on SDS-PAGE at 77.8 kDa for p39-MBP (35.4 kDa for p39 and 42.4 kDa for MBP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | <i>Borrelia burgdorferi</i> B31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>           | <i>E. coli</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | P39 is encoded by the spirochete <i>B. burgdorferi</i> , 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. The p39 protein, or Basic membrane protein A (BmpA), is one of the immunogenic cell membrane components displayed on the outer surface of <i>B. burgdorferi</i> , the spirochete carried by Ixodes ticks and is an important antigen for serodiagnosis of human infection. BmpA is involved in borrelial pathogenicity and participates in the development of borrelial arthritis. It is a member of the chromosomally-located paralogous family 36 which also includes BmpB, BmpC and BmpD. Its expression is co-regulated with that of BmpC and BmpB and may be subject to global regulation. |
| <b>Form</b>             | Liquid, 0.2 µm filter sterilised.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Molecular Mass</b>   | 77.8 kDa for p39-MBP (35.4 kDa for p39 and 42.4 kDa for MBP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purity</b>           | > 90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|                         |                                                                                                                      |
|-------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Storage</b>          | Short term: +2 to +8 centigrade<br>Long Term: -80 centigrade<br>Can be frozen, but avoid multiple freeze/thaw cycles |
| <b>Concentration</b>    | 1.0 mg/mL by UV absorbance at 280 nm                                                                                 |
| <b>Storage Buffer</b>   | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 and 0.01% (w/v) Sodium Azide.                             |
| <b>GENE INFORMATION</b> |                                                                                                                      |
| <b>Gene Name</b>        | BB_RS01885 BMP family protein [ <i>Borrelia burgdorferi</i> B31 ]                                                    |
| <b>Official Symbol</b>  | BB_RS01885                                                                                                           |
| <b>Synonyms</b>         | BB_RS01885; BMP family protein                                                                                       |
| <b>Gene ID</b>          | 1195220                                                                                                              |
| <b>Protein Refseq</b>   | WP_002656850                                                                                                         |

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**SDS-PAGE of P39  
protein**



Lane 1: Molecular Weight Marker

Lane 2: P39 protein.

Load: 10  $\mu$ L at 1:2 dilution.

Predicted/Observed size: 77.8 kDa fusion protein, 35.4 kDa for p39, 42.4 kDa for MBP alone.

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