

## Product datasheet

# Recombinant Human Myelin Basic Protein ab171675

1 Image

### Description

<b>Product name</b>	Recombinant Human Myelin Basic Protein
<b>Purity</b>	> 85 % SDS-PAGE. ab171675 was purified using conventional chromatography techniques.
<b>Expression system</b>	Escherichia coli
<b>Accession</b>	<a href="#">P02686-2</a>
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Human
<b>Sequence</b>	MGSSHHHHHHSSGLVPRGSHMGSMGNHAGKRELNAEK ASTNSETNRGESE KKRNLGELSRTTSEDNEVFGEADANQNGTSSQDTAVTD SKRTADPKNAW QDAHPADPGSRPHLIRLFSRDAPGREDNTFKDRPSESDE LQTIQEDSAAT SESLDVMA SQKRPSQRHGSKYLATASTMDHARHGFLPR HRDTGILDSIGR FFGGDRGAPKRGSGKVSSEE
<b>Predicted molecular weight</b>	24 kDa including tags
<b>Amino acids</b>	1 to 197
<b>Tags</b>	His tag N-Terminus

### Specifications

Our [Abpromise guarantee](#) covers the use of **ab171675** in the following tested applications.

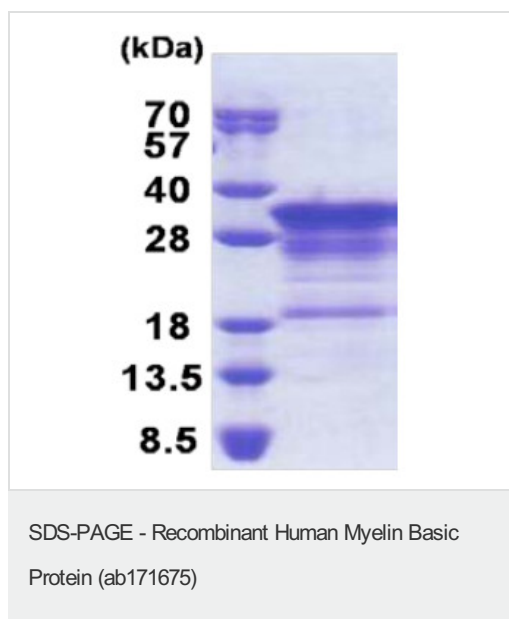
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE Mass Spectrometry
<b>Mass spectrometry</b>	MALDI-TOF
<b>Form</b>	Liquid

### Preparation and Storage

<b>Stability and Storage</b>	<p>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</p> <p>pH: 8.00</p> <p>Constituents: 0.32% Tris HCl, 10% Glycerol, 0.88% Sodium chloride</p>
<b>General Info</b>	
<b>Function</b>	<p>The classic group of MBP isoforms (isoform 4-isoform 14) are with PLP the most abundant protein components of the myelin membrane in the CNS. They have a role in both its formation and stabilization. The smaller isoforms might have an important role in remyelination of denuded axons in multiple sclerosis. The non-classic group of MBP isoforms (isoform 1-isoform 3/Golli-MBPs) may preferentially have a role in the early developing brain long before myelination, maybe as components of transcriptional complexes, and may also be involved in signaling pathways in T-cells and neural cells. Differential splicing events combined with optional post-translational modifications give a wide spectrum of isomers, with each of them potentially having a specialized function. Induces T-cell proliferation.</p>
<b>Tissue specificity</b>	<p>MBP isoforms are found in both the central and the peripheral nervous system, whereas Golli-MBP isoforms are expressed in fetal thymus, spleen and spinal cord, as well as in cell lines derived from the immune system.</p>
<b>Involvement in disease</b>	<p>Note=The reduction in the surface charge of citrullinated and/or methylated MBP could result in a weakened attachment to the myelin membrane. This mechanism could be operative in demyelinating diseases such as chronic multiple sclerosis (MS), and fulminating MS (Marburg disease).</p>
<b>Sequence similarities</b>	<p>Belongs to the myelin basic protein family.</p>
<b>Developmental stage</b>	<p>Expression begins abruptly in 14-16 week old fetuses. Even smaller isoforms seem to be produced during embryogenesis; some of these persisting in the adult. Isoform 4 expression is more evident at 16 weeks and its relative proportion declines thereafter.</p>
<b>Post-translational modifications</b>	<p>Several charge isomers of MBP; C1 (the most cationic, least modified, and most abundant form), C2, C3, C4, C5, C6, C7, C8-A and C8-B (the least cationic form); are produced as a result of optional PTM, such as phosphorylation, deamidation of glutamine or asparagine, arginine citrullination and methylation. C8-A and C8-B contain each two mass isoforms termed C8-A(H), C8-A(L), C8-B(H) and C8-B(L), (H) standing for higher and (L) for lower molecular weight. C3, C4 and C5 are phosphorylated. The ratio of methylated arginine residues decreases during aging, making the protein more cationic.</p> <p>The N-terminal alanine is acetylated (isoform 3, isoform 4, isoform 5 and isoform 6). Arg-241 was found to be 6% monomethylated and 60% symmetrically dimethylated.</p>
<b>Cellular localization</b>	<p>Myelin membrane. Cytoplasmic side of myelin.</p>

## Images



15% SDS-PAGE analysis of ab171675 (3µg).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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