# Recombinant PGBM protein (His tag)

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| **Catalog Number** | 542519 |
| **Synonyms** | HSPG; Perlecan; PLC |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | P98160 |
| **Molecular Weight** | Predictes a molecular mass of 19.04 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band. |

## Product Information

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| **Sequence Region** | 81-234 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >87%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **Endotoxin** | Not tested. |
| **Activity** | Not tested. |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **Protein Construction** | DNA encoding 81-234 aa (P98160) were fused with 6His tag. |

## Storage & Handling

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| **Reconstitution** | Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. |
| **Storage** | Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Shipping** | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | This product is a recombinant fragment (amino acids 81-234) of the human Basement Membrane-Specific Heparan Sulfate Proteoglycan Core Protein (Perlecan), a key component of basement membranes. The fragment is a stable, soluble unit ideal for structural and biochemical studies, supporting research in extracellular matrix biology, angiogenesis, and tissue development.<br>The full-length Basement Membrane-Specific Heparan Sulfate Proteoglycan Core Protein (HSPG2/Perlecan) is an integral component of basement membranes, contributing to their charge-selective barrier function and serving as an attachment substrate for cells. It plays essential roles in vascularization, heart development, and avascular cartilage formation. Notably, proteolytic cleavage generates bioactive peptides such as Endorepellin, which exhibits anti-angiogenic and anti-tumor properties by inhibiting endothelial cell migration and tube formation via integrin alpha2/beta1 binding, and the LG3 peptide, which also demonstrates anti-angiogenic activity dependent on calcium ion binding. The protein is secreted and localized to the extracellular space, extracellular matrix, and basement membranes, underscoring its significance in maintaining tissue integrity and regulating cellular responses. |