# Recombinant EMC10 protein (His tag)

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| **Catalog Number** | 545166 |
| **Synonyms** | Hematopoietic signal peptide-containing membrane domain-containing protein 1 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q5UCC4 |
| **Molecular Weight** | Predictes a molecular mass of 20.37 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band. |

## Product Information

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| **Sequence Region** | 50-221 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >90%, 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 50-221 aa (Q5UCC4) 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** | Recombinant Human EMC10 Protein Fragment (aa 50-221) is a high-purity, stable, and soluble protein designed for structural and functional studies. This fragment of ER membrane protein complex subunit 10 (EMC10) retains key properties ideal for investigating its role in membrane protein insertion and cellular signaling pathways.<br>The full-length EMC10 protein is a component of the endoplasmic reticulum membrane protein complex (EMC), which facilitates the energy-independent insertion of newly synthesized membrane proteins into the ER membrane. It preferentially accommodates transmembrane domains with weak hydrophobicity or destabilizing features and is involved in both cotranslational insertion of multi-pass membrane proteins (e.g., G protein-coupled receptors) and post-translational insertion of tail-anchored proteins. EMC10 also plays a role in angiogenesis and tissue repair, particularly after myocardial infarction, by stimulating cardiac endothelial cell migration via activation of p38 MAPK, PAK, and MAPK2 signaling pathways.<br>Isoform 1 is localized to the endoplasmic reticulum membrane as a single-pass type I membrane protein, while isoform 2 is secreted, highlighting its diverse functional roles in cellular processes. |