# Recombinant MESD protein (His tag)

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| **Catalog Number** | 540307 |
| **Synonyms** | LDLR chaperone MESD; Mesoderm development LRP chaperone MESD; Mesoderm development candidate 2; Mesoderm development protein; Renal carcinoma antigen NY-REN-61 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q14696 |
| **Molecular Weight** | Predictes a molecular mass of 11.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band. |

## Product Information

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| **Sequence Region** | 104-194 |
| **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 104-194 aa (Q14696) 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** | Introducing the recombinant LRP chaperone MESD fragment (amino acids 104-194), a highly stable and soluble protein unit designed for advanced structural and biochemical studies. This fragment, derived from the human MESD protein, offers researchers a reliable tool to investigate the chaperone functions critical for low-density lipoprotein receptor folding and Wnt signaling modulation.<br>LRP chaperone MESD is an essential endoplasmic reticulum-resident protein that specifically assists in the folding of beta-propeller/EGF modules within low-density lipoprotein receptors (LDLRs). It plays a crucial role as a modulator of the Wnt signaling pathway by chaperoning the coreceptors LRP5 and LRP6 to the plasma membrane. The protein is vital for embryonic polarity specification, mesoderm induction, and neuromuscular junction formation through its promotion of LRP4 cell-surface expression. Additionally, MESD may regulate phagocytosis of apoptotic retinal pigment epithelium cells. The selected fragment (104-194) represents a computationally optimized stable region that maintains structural integrity while excluding complex domains, making it ideal for mechanistic studies of chaperone function. |