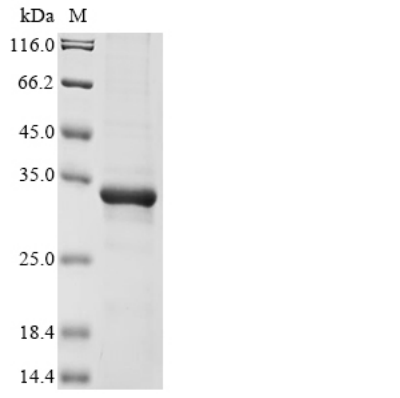
Recombinant Human Meteorin (METRN)

Product Code	CSB-EP892322HUa0
Abbreviation	Recombinant Human METRN protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q9UJH8
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	GYSEERCSWRGSGLTQEPGSVGQLALACAEGAVEWLYPAGALRLTLGGPDP RARPGIACLRPVRPFAGAQVFAERAGGALELLLAEGPGPAGGRCVRWGPRE RRALFLQATPHQDISRRVAAFRFELREDGRPELPPQAHGLGVDGACRPCSDA ELLLAACTSDFVIHGIIHGVTHDVELQESVITVVAARVLRQTPPLFQAGRSGDQ GLTSIRTPLRCGVHPGPGTFLFMGWSRFGEARLGCAPRFQEFRRAYEAARAA HLHPCEVALH
Research Area	Neuroscience
Source	E.coli
Target Names	METRN
Expression Region	24-293aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	33.1 kDa
Protein Length	Full Length of Mature Protein
Image	 (Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Human Meteorin (METRN) is produced in E.coli and includes the full length of the mature protein, corresponding to amino acids 24-293. The protein features an N-terminal 6xHis tag for easier purification and detection. With a purity level exceeding 85% as confirmed by SDS-PAGE, this product appears suitable for research applications requiring high-quality protein samples.

Meteorin is a secreted protein known for its involvement in neural development and repair processes. It may play a role in promoting the differentiation of glial cells and angiogenesis, making it a significant focus in studies related to neurobiology and vascular biology. Researchers often turn to Meteorin to explore pathways critical for nervous system function and potential therapeutic applications.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Protein-Protein Interaction Studies Using Pull-Down Assays

The N-terminal 6xHis-tagged recombinant human METRN can be immobilized on nickel-affinity beads to identify potential binding partners from cell lysates or purified protein libraries. This approach allows for systematic screening of METRN interactions with other proteins in controlled in vitro conditions. High purity (>85%) suggests minimal background binding from contaminant proteins during pull-down experiments. The full-length mature protein (24-293aa) provides the complete functional domain architecture for authentic interaction studies, though researchers should consider that bacterial expression may lack some post-translational modifications present in native conditions.

2. Antibody Development and Validation

This recombinant METRN protein serves as what appears to be an ideal immunogen for generating polyclonal or monoclonal antibodies specific to human METRN. E.coli expression produces protein with minimal post-translational modifications, which may actually be advantageous for antibody production targeting the core protein sequence. The 6xHis tag can be used for protein purification and immobilization during antibody screening assays such as ELISA. Generated antibodies can then be validated for specificity using Western blot analysis with this same recombinant protein as a positive control.

3. Structural and Biophysical Characterization Studies

Purified recombinant METRN protein can be used for detailed structural analysis. Circular dichroism spectroscopy may help determine secondary structure content and thermal stability studies. The high purity level makes it

suitable for analytical techniques such as dynamic light scattering to assess protein aggregation states and size distribution. Mass spectrometry analysis can confirm the expected molecular weight and assess protein integrity, though some variability in results might occur depending on storage conditions. These biophysical characterizations provide fundamental insights into METRN protein properties under various buffer conditions.

4. Cell-Based Binding and Uptake Assays

The recombinant METRN protein can be fluorescently labeled or biotinylated for cell-based binding studies to identify potential cellular receptors or binding sites. Flow cytometry and fluorescence microscopy can be used to analyze protein binding kinetics and cellular localization patterns, though optimal conditions may require some troubleshooting. The 6xHis tag enables easy detection using anti-His antibodies in immunofluorescence experiments. These studies help elucidate METRN's cellular targets and binding mechanisms in various cell types under controlled research conditions, keeping in mind that results may vary between different cell lines and experimental setups.

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