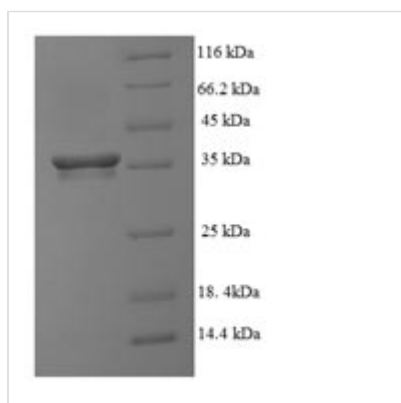




Recombinant Human Vasculin (GPBP1), partial

Product Code	CSB-EP774823HU
Relevance	Functions as a GC-rich promoter-specific transactivating transcription factor.
Abbreviation	Recombinant Human GPBP1 protein, partial
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.	Q86WP2
Alias	GC-rich promoter-binding protein 1Vascular wall-linked protein
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MRTDKKSEFLKALKRDRVEEEHEDES RAGSEKDDDSFNLHNSNSTHQERDIN RNF DENEIPQENGNASVISQQIIRSSSTFPQTDVLSSSLEAEHRLKEMGWQED SENDETCAPLTEDEMREFQVISEQLQKNGLRKNGLKNGLICDFKFGPWKNST FKPTTENDDTETSSSDTSDDDDV
Research Area	Transcription
Source	E.coli
Target Names	GPBP1
Expression Region	293-473aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	36.8kDa
Protein Length	Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Description

Recombinant Human Vasculin (GPBP1) is produced in an E.coli expression system, covering amino acids 293-473 of the full protein. The protein carries an N-terminal 6xHis-SUMO tag to aid in purification and appears to enhance stability. SDS-PAGE analysis shows purity greater than 90%, which makes it appropriate for various research applications. This product is for research use only and is not intended for diagnostic or therapeutic purposes.

The GPBP1 gene encodes vasculin, which seems to play a role in transcriptional regulation and has been linked to modulating gene expression. It's involved in important pathways related to vascular development and function. Understanding this protein's activity and interactions may be essential for research focused on vascular biology and related fields, potentially offering insights into cellular processes and therapeutic targets.

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-SUMO tag allows for efficient attachment of this GPBP1 fragment (293-473aa) to nickel-affinity resins during pull-down experiments. Scientists can incubate the attached protein with cell lysates or purified protein libraries to discover new binding partners of vasculin's C-terminal region. The high purity (>90%) likely ensures minimal background binding from contaminants. This method appears particularly useful for mapping interaction domains within the 293-473aa region of GPBP1.

2. Antibody Development and Epitope Mapping

This recombinant GPBP1 fragment may serve as an immunogen for creating antibodies specific to the 293-473aa region of human vasculin. The purified protein provides a well-defined antigen for immunization protocols in laboratory animals. The same protein can then be used in ELISA-based screening to identify antibodies with high specificity and affinity. The His-SUMO tag makes purification and attachment straightforward during antibody validation assays.

3. Structural and Biophysical Characterization Studies

The high-purity recombinant protein appears suitable for biophysical analyses including circular dichroism spectroscopy, dynamic light scattering, and analytical ultracentrifugation to examine the folding and oligomerization properties of this GPBP1 domain. Nuclear magnetic resonance or X-ray crystallography studies might provide structural insights into the 293-473aa region. If native protein structure is required for these analyses, the SUMO tag can be removed using SUMO protease.



4. In Vitro Functional Assays and Biochemical Analysis

This GPBP1 fragment can be used to explore the biochemical properties and potential enzymatic activities of vasculin's C-terminal domain under controlled in vitro conditions. Scientists can conduct substrate binding assays, thermal stability studies, and pH optimization experiments to characterize how the protein behaves. The His tag allows for easy protein recovery and reuse across multiple experimental conditions, which could make it cost-effective for extensive biochemical characterization studies.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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.