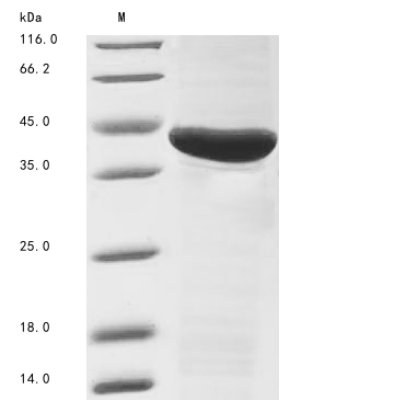
Recombinant Vespa magnifica Hyaluronidase

Product Code	CSB-EP308534VBQ
Abbreviation	Recombinant Vespa magnifica Hyaluronidase 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.	P86875
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Vespa magnifica (Hornet)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	SERPKRVFNIYWNVPTFMCHQYGLYFDEVTNFNIKHNSKDNFQGDKIAIFYDP GEFPALLPLNYGKYKIRNGGVPQEGNITIHLQRFIEYLDKTYPNRNFSGIGVIDF ERWRPIFRQNWGNMKIYKNFSIDLVRKEHPFWNKKMIELEASKRFEKYARLFM EETLKLAKKTRKQADWGYYGYPYCFNMSPTNFVPDCDVTARDENNEMSWLF NNQNVLLPSVYIRRELTPDQRIGLVQGRVKEAVRISNKLKHSPKVFSYWWYVY QDETNTFLTETDVKKTFQEIVINGGDGIIIWGSSSDVNSLSKCTRLREYLLTVLG PIAVNVTEAVN
Research Area	Others
Source	E.coli
Target Names	N/A
Protein Names	Recommended name: Hyaluronidase Short name= Hya EC= 3.2.1.35 Alternative name(s): Hyaluronoglucosaminidase
Expression Region	27-357aa
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	45.1 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 Vespa magnifica Hyaluronidase is produced in E. coli and includes an N-terminal 6xHis-tag to simplify purification and detection. The product represents the full length of the mature protein, spanning amino acids 27 to 357. Purity levels exceed 85% as confirmed by SDS-PAGE, which appears to make it sufficiently reliable for research purposes. This product is designed exclusively for research use and is not intended for diagnostic or therapeutic applications.

Hyaluronidase from Vespa magnifica plays a key role in breaking down hyaluronic acid, a major component of the extracellular matrix. When this enzyme degrades hyaluronic acid, it may help other molecules or cells spread more easily through tissue. This characteristic suggests that hyaluronidase could serve as an important tool for studying tissue permeability and matrix biology, particularly in applications requiring enhanced tissue penetration.

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. Biochemical Characterization and Enzyme Kinetics Studies

This recombinant hyaluronidase can help establish fundamental biochemical properties including substrate specificity, optimal pH and temperature conditions, and kinetic parameters. The N-terminal 6xHis tag makes purification and immobilization more straightforward for detailed enzymatic studies. Researchers might investigate how the enzyme acts against various glycosaminoglycan substrates to better understand its catalytic mechanism. The >85% purity level appears sufficient for reliable biochemical assays and comparative studies with other hyaluronidases.

2. Antibody Development and Immunological Studies

The recombinant protein may serve as an effective antigen for generating specific antibodies against Vespa magnifica hyaluronidase. His-tagged protein

can be incorporated into immunization protocols for monoclonal or polyclonal antibody production. These antibodies would likely prove valuable as research tools for studying hyaluronidase distribution, localization, and expression in hornet venom systems. The mature protein sequence (27-357aa) represents the native form that is likely to trigger biologically relevant immune responses.

3. Comparative Venom Component Analysis

This protein allows for comparative studies of hyaluronidase variants across different Vespa species and other venomous insects. Researchers can examine structural and functional differences between hornet hyaluronidases and those from other sources. The recombinant format permits standardized comparative assays without requiring venom extraction. Such studies may contribute to understanding evolutionary relationships and functional diversification of hyaluronidases in venomous species.

4. His-Tag Affinity-Based Interaction Studies

The N-terminal 6xHis tag makes pull-down experiments and affinity-based assays possible for identifying potential binding partners or inhibitors. Researchers can use nickel-affinity chromatography to study protein-protein interactions or screen for small molecule inhibitors. The tag also enables ELISA-based binding studies and surface plasmon resonance experiments. These applications appear particularly valuable for understanding the protein's role in venom composition and identifying potential research targets for venom component studies.

Shelf Life

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