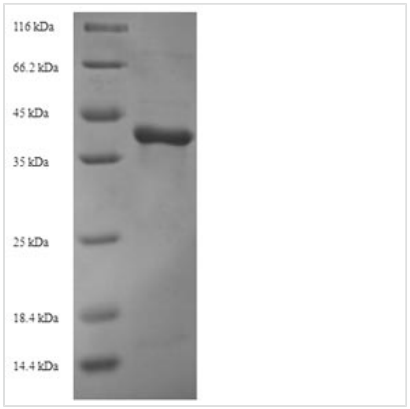
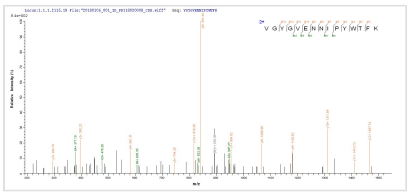
Recombinant Autographa californica nuclear polyhedrosis virus Viral cathepsin (VCATH)

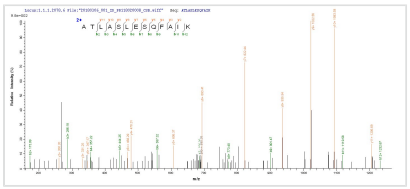
Product Code	CSB-EP340730ARA
Relevance	Cysteine protease that plays an essential role in host liquefaction to facilitate horizontal transmission of the virus. May participate in the degradation of foreign protein expressed by the baculovirus system (By similarity).
Abbreviation	Recombinant Autographa californica nuclear polyhedrosis virus VCATH 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.	P25783
Alias	Cysteine proteinase Short name: CP
Product Type	Recombinant Protein
Immunogen Species	Autographa californica nuclear polyhedrosis virus (AcMNPV)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	PLEFDWRRLNKVTSVKNQGMCGACWAFATLASLESQFAIKHNQLINLSEQQMI DCDFVDAGCNGGLLHTAFEAIIKMGGVQLESDYPYEADNNNCRMNSNKFLVQ VKDCYRYITVYEEKLKDLLRLVGPIPMAIDAADIVNYKQGIIKYCFNSGLNHAVLL VGYGVENNIPYWTFKNTWGTDWGEDGFFRVQQNINACGMRNELASTAVIY
Research Area	Others
Source	E.coli
Target Names	VCATH
Expression Region	113-323aa
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	39.9kDa
Protein Length	Full Length of Mature Protein
Image	



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



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP340730ARA could indicate that this peptide derived from E.coli-expressed Autographa californica nuclear polyhedrosis virus (AcMNPV) VCATH.



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Description

The region for expressing recombinant AcMNPV VCATH contains amino acids 113-323. The expected molecular weight for the VCATH protein is calculated to be 39.9 kDa. The VCATH protein was expressed in e.coli. The N-terminal 6xHis-SUMO tag was smoothly integrated into the coding gene of VCATH, which enables a simple process of detecting and purifying the VCATH recombinant protein in the following steps.

The Viral Cathepsin (VCATH) of Autographa californica nuclear polyhedrosis virus (AcMNPV) is an enzyme that facilitates the proteolytic processing of viral polyhedron envelope proteins during the late stages of the viral life cycle. VCATH is essential for the maturation of occlusion bodies, which are viral structures containing virions that help in the transmission of the virus between insect hosts. During the late stages of AcMNPV infection, VCATH is involved in the cleavage of polyhedrin, a major constituent of occlusion bodies, to release mature virions. This process ensures the efficient spread of the virus within the insect host. Research on VCATH contributes to the understanding of baculovirus biology, protein processing in viral infections, and the development of baculovirus-based expression systems for the production of recombinant proteins.

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.