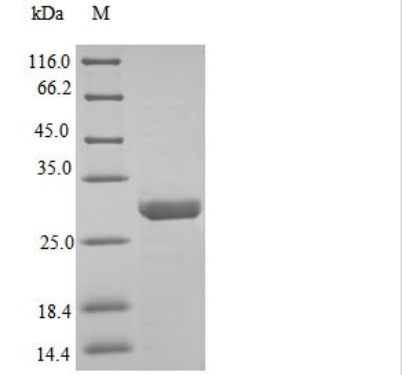
Recombinant Crotalus adamanteus Snake venom metalloproteinase adamalysin-2

Product Code	CSB-EP330325DYB
Relevance	Has no significant hemorrhagic activity, but inactivates serpins by limited proteolysis of their reactive-site loops.
Abbreviation	Recombinant Crotalus adamanteus Snake venom metalloproteinase adamalysin-2 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.	P34179
Alias	Adamalysin II Proteinase II
Product Type	Recombinant Protein
Immunogen Species	Crotalus adamanteus (Eastern diamondback rattlesnake)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	QQNLPQRYIELVVVADRRVFMKYNSDLNIIRTRVHEIVNIINGFYRSLNIDVSLVN LEIWSGQDPLTIQSSSSNTLNSEGLWREKVLLNKKKKDNAQLLTAIEFKCETLG KAYLNSMCNPRSSVGIVKDHSPINLLVAVTMAHELGHNLGMEHDGKDCLRGA SLCIMRPGLTPGRSYEFSDDSMGYYQKFLNQYKPQCILNKP
Source	E.coli
Protein Names	Recommended name: Zinc metalloproteinase adamalysin-2 EC= 3.4.24.46Alternative name(s): Adamalysin II Proteinase II
Expression Region	1-203aa
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	27.1kDa
Protein Length	Full Length
Image	



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

Description

Producing recombinant Crotalus adamanteus Snake venom metalloproteinase adamalysin-2 first isolates the target gene, which covers the full-length Snake venom metalloproteinase adamalysin-2 (1-203aa). This gene is co-cloned into an appropriate expression vector with an N-terminal 6xHis-tag gene and introduced into E. coli cells. The positive E. coli cells are cultured to express the recombinant protein. After that, these cells undergo lysis to release the protein. Purification of the protein is typically achieved using affinity chromatography. The purity of the recombinant Snake venom metalloproteinase adamalysin-2 is over 90% as determined by SDS-PAGE.

Crotalus adamanteus adamalysin-2 is a significant component found in the venom of the Crotalus adamanteus. This protein belongs to the adamalysin or ADAM family, which includes proteolytic domains found in snake venom metalloproteinases, mammalian reproductive tract proteins, and tumor necrosis factor-alpha convertase (TACE) [1]. Adamalysin-2 is a 24 kDa zinc endopeptidase that is part of a large family of metalloproteinases and is crucial for various biological activities, requiring Zn2+ and Ca2+ as cofactors [2]. It is a well-known metalloendopeptidase toxin that can be inhibited by certain molecules like Jatromollistatin, a cyclic heptapeptide, as demonstrated through molecular docking analysis [3].

References:
[1] F. Gomis?Rüth, E. Meyer, L. Kress, & V. Politi, Structures of adamalysin ii with peptidic inhibitors. implications for the design of tumor necrosis factor α convertase inhibitors, Protein Science, vol. 7, no. 2, p. 283-292, 1998. https://doi.org/10.1002/pro.5560070207
[2] P. Phan, A review of rattlesnake venoms, Toxins, vol. 16, no. 1, p. 2, 2023. https://doi.org/10.3390/toxins16010002
[3] T. Jucá, M. Ramos, E. Cilli, A. Neto, S. Mackessy, & A. Monteiro-Moreira, Insights on the inhibition properties ofjatromollistatin(a cyclic heptapeptide) againstcrotalus adamanteusmetalloendopeptidase using molecular docking analysis, Journal of Molecular Recognition, vol. 35, no. 7, 2022. https://doi.org/10.1002/jmr.2957

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.