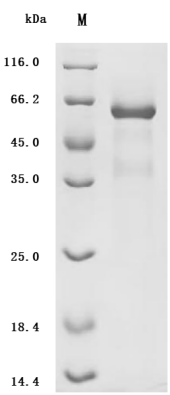
Recombinant Human Disintegrin and metalloproteinase domain-containing protein 9 (ADAM9),Partial (Active)

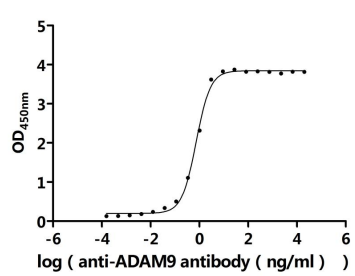
Product Code	CSB-MP618774HU
Abbreviation	Recombinant Human ADAM9 protein, partial (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q13443
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 μm filtered PBS, 6% Trehalose, pH 7.4
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human ADAM9 at 2 μg/mL can bind Anti-ADAM9 recombinant antibody (CSB-RA618774MA1HU). The EC50 is 0.9401-1.088 ng/mL.
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	AARPGFQQTSHLSSYEIITPWRLTRERREAPRPYSKQVSYVIQAEGKEHIIHLE RNKDLLPEDFVVYTYNKEGTLITDHPNIQNHCHYRGYVEGVHNSSIALSDCFGL RGLLHLENASYGIEPLQNSSHFEHIIYRMDDVYKEPLKCGVSNKDIEKETAKDE EEEPPSMTQLLRRRRAVLPQTRYVELFIVVDKERYDMMGRNQTAVREEMILLA NYLDSMYIMLNIRIVLVGLEIWTNGNLINIVGGAGDVLGNFVQWREKFLITRRRH DSAQLVLKKGFGGTAGMAFVGTVCSRSHAGGINVFGQITVETFASIVAHELGH NLGMNHDDGRDCSCGAKSCIMNSGASGSRNFSSCSAEDFEKLTLNKGGNCL LNIPKPDEAYSAPSCGNKLVDAGEECDCGTPKECELDPCCEGSTCKLKSFAEC AYGDCCKDCRFLPGGTLCRGKTSECDVPEYCNGSSQFCQPDVFIQNGYPCQ NNKAYCYNGMCQYYDAQCQVIFGSKAKAAPKDCFIEVNSKGDRFGNCGFSG NEYKKCATGNALCGKLQCENVQEIPVFGIVPAIIQTPSRGTKCWGVDFQLGSD VPDPGMVNEGTKCGAGKICRNFQCVDASVLNYDCDVQKKCHGHGVCNSNKN CHCENGWAPPNCETKGYGGSVDSGPTYNEMNTALRD
Source	Mammalian cell
Target Names	ADAM9
Expression Region	29-697aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 10xHis-tagged

Mol. Weight	75.3 kDa
Protein Length	Partial

Image



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



Activity
Measured by its binding ability in a functional ELISA. Immobilized Human ADAM9 at 2 μg/ml can bind Anti-ADAM9 recombinant antibody (CSB-RA618774MA1HU). The EC_{50} is 0.9401-1.088 ng/mL.

Description

The recombinant ADAM9 is a recombinant human protein produced in a mammalian cell expression system. The target gene encoding the Ala29-Asp697 of the human ADAM9 is co-expressed with the C-terminal 10xHis-tag gene. Its purity is over 90% as determined by SDS-PAGE. Its endotoxin level is less than 1.0 EU/ug as determined by the LAL method. It has been validated to be biologically active in a functional ELISA where immobilized human ADAM9 at 2 μg/mL can bind the anti-ADAM9 recombinant antibody (CSB-RA618774MA1HU), with the EC_{50} of 0.9401-1.088 ng/mL.

Human ADAM9 (A Disintegrin and Metalloproteinase 9) is a member of the ADAM family of proteins, characterized by their metalloprotease and disintegrin domains. ADAM9 is widely expressed in various tissues and is known to be involved in the degradation of extracellular matrix (ECM) components, which is crucial for tumor cell invasion and migration [1][2][3][4].

ADAM9 is particularly notable for its involvement in cancer biology. Studies have shown that the expression of ADAM9 is significantly upregulated in several types of cancers, including prostate, lung, and gastric cancers. ADAM9 has been linked to increased invasive capacity and brain metastasis in non-small cell lung cancer (NSCLC) [2][5]. In prostate cancer, ADAM9 expression correlates with poor clinical outcomes and is associated with disease recurrence following treatment [6][7]. Furthermore, ADAM9 has been implicated in the regulation of tumor-stromal interactions, enhancing the motility of cancer cells [8].

The regulation of ADAM9 expression is influenced by various factors, including oxidative stress and hypoxia, which are common in the tumor microenvironment. Reactive oxygen species (ROS) have been identified as mediators that induce ADAM9 expression in prostate cancer cells, suggesting a link between stress responses and tumor progression [9][10].

Recent research has also highlighted the potential role of ADAM9 in viral infections, particularly in the context of SARS-CoV-2. It has been identified as a key factor that facilitates viral entry into cells, especially those with low ACE2 expression, indicating its relevance beyond cancer biology [11]. This dual role in both cancer and viral pathogenesis underscores the importance of ADAM9 as a target for therapeutic interventions.

References:

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Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
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.