

Vimentin (VIM) Active Protein | VIM active protein

Active Vimentin (VIM)

CATALOG # AAA150975	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Vimentin (VIM); Active Vimentin (VIM); VIM/Vimentin; VIM active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 97% by SDS-PAGE
Form/Format	Freeze-dried powder 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Sequence	Ser2~Glu46 6
Applicable Applications for VIM active protein	Activity Assay, Cell Culture
Endotoxin	<1.0EU per 1ug (determined by the LAL method)
Tag	N-terminal His Tag
Biological Activity	Active
Expression System	Prokaryotic expression
Organism Species	Human
Isoelectric Point	5.2
Subcellular Location	Secreted
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0mg/mL. Do not vortex.
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months Stable for 12 months if correctly stored. The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

STRSVSSSS YRRMFGPGT ASRPSSRSY VTTSTRYSL GSALRPSTSR
SLYASSPGGV YATRSSAVRL RSSVPGVRL QDSVDFSLAD AINTEFKNTR
TNEKVELQEL NDRFANYIDK VRFLEQNKI LLAELEQLKG QGKSRLGDLY
EEMRELRRQ VDQLTNDKAR VEVEDNLAE DIMRLREKLQ EEMLQREEAE
NTLQSFQDV DNASLARLDL ERKVESLQEE IAFLLKLHEE EIQLQAQIQ
EQHVQIDVDV SKPDLTAALR DVRRQYESVA AKNLQEAEEV YKSKFADLSE
AANRNNDALR QAKQESTEYR RQVQSLTCEV DALKGTNESL ERQRMREEN
FAVEAANYQD TIGRLQDEIQ NMKEEMARHL REYQDLLNVK MALDIEIATY
RKLLGEESR ISLPLPNFSS LNLRETNLDS LPLVDTHSKR TLLIKTVETR
DCQVINETSQ HHDDLE

Sequence

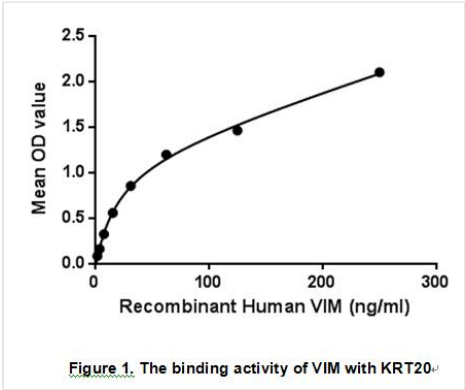
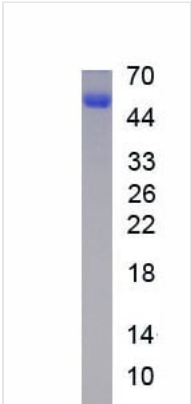
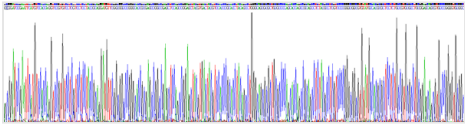


Figure 1. The binding activity of VIM with KRT20.

Bioactivity
Vimentin (VIM) is a type III intermediate filament (IF) protein that is expressed in mesenchymal cells. Vimentin is the major cytoskeletal component of mesenchymal cells. Because of this, vimentin is often used as a marker of mesenchymally-derived cells or cells undergoing an epithelial-to-mesenchymal transition (EMT) during both normal development and metastatic progression. Besides, Keratin 20 (KRT20) has been identified as an interactor of VIM, thus a binding ELISA assay was conducted to detect the interaction of recombinant human VIM and recombinant human KRT20. Briefly, VIM were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µl then transferred to KRT20-coated microtiter wells and incubated for 2h at 37°. Wells were washed with PBST and incubated for 1h with anti-VIM pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°. Finally, add 50ul stop solution to the wells and read at 450nm immediately. The binding activity of VIM and KRT20 was shown in Figure 1, and this effect was in a dose dependent manner.



SDS-PAGE
SDS-PAGE



Sequence
Gene Sequencing (extract)

ADDITIONAL INFORMATION

Related Product Information for VIM active protein	Vimentin (VIM) is a type III intermediate filament (IF) protein that is expressed in mesenchymal cells. Vimentin is the major cytoskeletal component of mesenchymal cells. Because of this, vimentin is often used as a marker of mesenchymally-derived cells or cells undergoing an epithelial-to-mesenchymal transition (EMT) during both normal development and metastatic progression. Besides, Keratin 20 (KRT20) has been identified as an interactor of VIM, thus a binding ELISA assay was conducted to detect the interaction of recombinant human VIM and recombinant human KRT20. Briefly, VIM were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µl then transferred to KRT20-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-VIM pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50ul stop solution to the wells and read at 450nm immediately. The binding activity of VIM and KRT20 was shown in Figure 1, and this effect was in a dose dependent manner.
Product Categories/Family for VIM active protein	Tumor immunity; Developmental science; Active, prokaryotic recombinant

NCBI AND UNIPROT INFORMATION

NCBI GI #	62414289
NCBI GeneID	7431
NCBI Accession #	NP_003371.2
NCBI GenBank Nucleotide #	NM_003380.3
UniProt Accession #	P08670; Q15867; Q15868; Q15869; Q548L2; Q6LER9; Q8N850; Q96ML2; Q9NTM3; B0YJC2; D3DRU4
Molecular Weight	53,652 Da
NCBI Official Full Name	vimentin
NCBI Official Synonym Full Names	vimentin
NCBI Official Symbol	VIM
NCBI Protein Information	vimentin
UniProt Protein Name	Vimentin
UniProt Gene Name	VIM
UniProt Entry Name	VIME_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/vimentin-vim/150975>