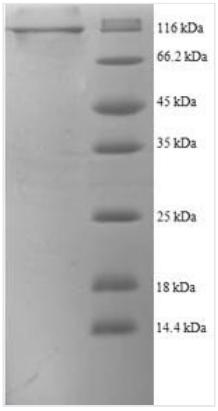
Seprase (FAP) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Seprase (FAP), Recombinant Protein
Full Product Name	Recombinant Human Seprase
Product Gene Name	FAP recombinant protein
Product Synonym Names	170 kDa melanoma membrane-bound gelatinase2
Sequence	LRPSRVHNSE ENTMRALTLK DILNGTFSYK TFFPNWISGQ EYLHQSADNN IVLYNIETGQ SYTILSNRTM KSVNASNYGL SPDRQFVYLE SDYSKLWRYS YTATYYIYDL SNGEFVRGNE LPRPIQYLCW SPVGSKLAYV YQNNIYLKQR PGDPPFQITF NGRENKIFNG IPDWVYEEEM LATKYALWWS PNGKFLAYAE FNDTDIPVIA YSYYGDEQYP RTINIPYPKA GAKNPVVRIF IIDTTYPAYV GPQEVPVPAM IASSDYYFSW LTWVTDERVC LQWLKRVQNV SVLSICDFRE DWQTWDCPKT QEHIEESRTG WAGGFFVSTP VFSYDAISYY KIFSDKDGYK HIHYIKDTVE NAIQITSGKW EAINIFRVTQ DSLFYSSNEF EEYPGRRNIY RISIGSYPPS KKCVTCHLRK ERCQYYTASF SDYAKYYALV CYGPGIPIST LHDGRTDQEI KILEENKELE NALKNIQLPK EEIKKLEVDE ITLWYKMILP PQFDRSKKYP LLIQVYGGPC SQSVRSVFAV NWISYLASKE GMVIALVDGR GTAFQGDKLL YAVYRKLGVY EVEDQITAVR KFIEMGFIDE KRIAIWGWSY GGYVSSLALA SGTGLFKCGI AVAPVSSWEY YASVYTERFM GLPTKDDNLE HYKNSTVMAR AEYFRNVDYL LIHGTADDNV HFQNSAQIAK ALVNAQVDFQ AMWYSDQNHG LSGLSTNHLY THMTHFLKQC FSLSD
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.
Molecular Weight	112 kDa
Sequence Positions	26-760aa; partial
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
OMIM	600403
3D Structure	ModBase 3D Structure for Q12884
Product Categories/Family for FAP recombinant protein	Cancer
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.

Related Product Information for FAP recombinant protein	Cell surface glycoprotein serine protease that participates in extracellular matrix degradation and involved in many cellular processes including tissue remodeling, fibrosis, wound healing, inflammation and tumor growth. Both plasma membrane and soluble forms exhibit post-proline cleaving endopeptidase activity, with a marked preference for Ala/Ser-Gly-Pro-Ser/Asn/Ala consensus sequences, on substrate such as alpha-2-antiplasmin SERPINF2 and SPRY2. Degrade also gelatin, heat-denatured type I collagen, but not native collagen type I and IV, vibronectin, tenascin, laminin, fibronectin, fibrin or casein. Have also dipeptidyl peptidase activity, exhibiting the ability to hydrolyze the prolyl bond two residues from the N-terminus of synthetic dipeptide substrates provided that the penultimate residue is proline, with a preference for Ala-Pro, Ile-Pro, Gly-Pro, Arg-Pro and Pro-Pro. Natural neuropeptide hormones for dipeptidyl peptidase are the neuropeptide Y (NPY), peptide YY (PYY), substance P (TAC1) and brain natriuretic peptide 32 (NPPB). The plasma membrane form, in association with either DPP4, PLAUR or integrins, is involved in the pericellular proteolysis of the extracellular matrix (ECM), and hence promotes cell adhesion, migration and invasion through the ECM. Plays a role in tissue remodeling during development and wound healing. Participates in the cell invasiveness towards the ECM in malignant melanoma cancers. Enhances tumor growth progression by increasing angiogenesis, collagen fiber degradation and apoptosis and by reducing antitumor response of the immune system. Promotes glioma cell invasion through the brain parenchyma by degrading the proteoglycan brevican. Acts as a tumor suppressor in melanocytic cells through regulation of cell proliferation and survival in a serine protease activity-independent manner.
Product References and Citations for FAP recombinant protein	Molecular cloning of fibroblast activation protein alpha, a member of the serine protease family selectively expressed in stromal fibroblasts of epithelial cancers.Scanlan M.J., Raj B.K.M., Calvo B., Garin-Chesa P., Sanz-Moncasi M.P., Healey J.H., Old L.J., Rettig W.J.Proc. Natl. Acad. Sci. U.S.A. 91:5657-5661(1994) Molecular cloning of seprase a serine integral membrane protease from human melanoma.Goldstein L.A., Ghersi G., Pineiro-Sanchez M.L., Salamone M., Yeh Y., Flessate D., Chen W.-T.Biochim. Biophys. Acta 1361:11-19(1997) Identification of the 170-kDa melanoma membrane-bound gelatinase (seprase) as a serine integral membrane protease.Pineiro-Sanchez M.L., Goldstein L.A., Dodt J., Howard L., Yeh Y., Chen W.-T.J. Biol. Chem. 272:7595-7601(1997) Identification of an alternatively spliced seprase mRNA that encodes a novel intracellular isoform.Goldstein L.A., Chen W.-T.J. Biol. Chem. 275:2554-2559(2000) Generation and annotation of the DNA sequences of human chromosomes 2 and 4.Hillier L.W., Graves T.A., Fulton R.S., Fulton L.A., Pepin K.H., Minx P., Wagner-McPherson C., Layman D., Wylie K., Sekhon M., Becker M.C., Fewell G.A., Delehaunty K.D., Miner T.L., Nash W.E., Kremitzki C., Oddy L., Du H., Sun H., Bradshaw-Cordum H., Ali J., Carter J., Cordes M., Harris A., Isak A., van Brunt A., Nguyen C., Du F., Courtney L., Kalicki J., Ozersky P., Abbott S., Armstrong J., Belter E.A., Caruso L., Cedroni M., Cotton M., Davidson T., Desai A., Elliott G., Erb T., Fronick C., Gaige T., Haakenson W., Haglund K., Holmes A., Harkins R., Kim K., Kruchowski S.S., Strong C.M., Grewal N., Goyea E., Hou S., Levy A., Martinka S., Mead K., McLellan M.D., Meyer R., Randall-Maher J., Tomlinson C., Dauphin-Kohlberg S., Kozlowicz-Reilly A., Shah N., Swearengen-Shahid S., Snider J., Strong J.T., Thompson J., Yoakum M., Leonard S., Pearman C., Trani L., Radionenko M., Waligorski J.E., Wang C., Rock S.M., Tin-Wollam A.-M., Maupin R., Latreille P., Wendl M.C., Yang S.-P., Pohl C., Wallis J.W., Spieth J., Bieri T.A., Berkowicz N., Nelson J.O., Osborne J., Ding L., Meyer R., Sabo A., Shotland Y., Sinha P., Wohldmann P.E., Cook L.L., Hickenbotham M.T., Eldred J., Williams D., Jones T.A., She X., Ciccarelli F.D., Izaurralde E., Taylor J., Schmutz J., Myers R.M., Cox D.R., Huang X., McPherson J.D., Mardis E.R., Clifton S.W., Warren W.C., Chinwalla A.T., Eddy S.R., Marra M.A., Ovcharenko I., Furey T.S., Miller W., Eichler E.E., Bork P., Suyama M., Torrents D., Waterston R.H., Wilson R.K.Nature 434:724-731(2005)
Other Notes	Small volumes of FAP recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for FAP purchase	MBS1265618 is a recombinant protein targeting FAP. Also known as Recombinant Human Seprase. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.



SDS-PAGE of FAP recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for FAP. It may not necessarily be applicable to this product.

NCBI GeneID	2191
NCBI Accession #	NP_001278736.1
UniProt Primary Accession #	Q12884
UniProt Secondary Accession #	O00199; Q53TP5; Q86Z29; Q99998; Q9UID4
UniProt Related Accession #	Q12884
NCBI Official Synonym Full Names	fibroblast activation protein alpha
NCBI Official Symbol	FAP
NCBI Official Synonym Symbols	FAPA; SIMP; DPPIV
UniProt Protein Name	Prolyl endopeptidase FAP
UniProt Synonym Protein Names	170 kDa melanoma membrane-bound gelatinase
Protein Family	Prolyl endopeptidase
UniProt Gene Name	FAP
UniProt Synonym Gene Names	APCE
UniProt Entry Name	SEPR_HUMAN
NCBI Protein Information	prolyl endopeptidase FAP
NCBI Summary for FAP	The protein encoded by this gene is a homodimeric integral membrane gelatinase belonging to the serine protease family. It is selectively expressed in reactive stromal fibroblasts of epithelial cancers, granulation tissue of healing wounds, and malignant cells of bone and soft tissue sarcomas. This protein is thought to be involved in the control of fibroblast growth or epithelial-mesenchymal interactions during development, tissue repair, and epithelial carcinogenesis. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2014]
UniProt Comments for FAP	FAP: In association with DPP4 is involved in the pericellular proteolysis of the extracellular matrix (ECM), the migration and invasion of endothelial cells into the ECM. May have a role in tissue remodeling during development and wound healing, and may contribute to invasiveness in malignant cancers. Belongs to the peptidase S9B family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 3.4.21.26; Protease; Membrane protein, integral; EC 3.4.14.5 Chromosomal Location of Human Ortholog: 2q23 Cellular Component: apical part of cell; cell surface; cytoplasm; extracellular space; focal adhesion; integral to membrane; lamellipodium; plasma membrane Molecular Function: dipeptidyl-peptidase activity; endopeptidase activity; integrin binding; metalloendopeptidase activity; peptidase activity; protease binding; protein binding; protein dimerization activity; protein homodimerization activity; serine-type endopeptidase activity; serine-type peptidase activity Biological Process: angiogenesis; cell adhesion; endothelial cell migration; proteolysis; proteolysis involved in cellular protein catabolic process; regulation of fibrinolysis
Research Articles on FAP	**1.** FAP expression is associated with worse prognosis in solid tumors
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