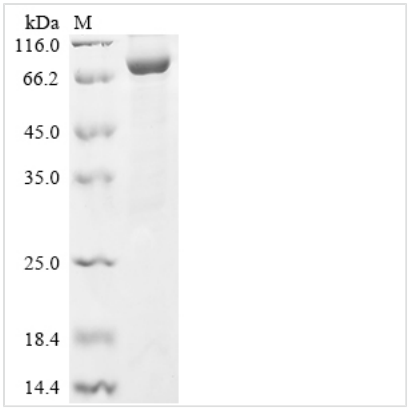
Recombinant Human Prolyl endopeptidase FAP (FAP), partial

Product Code	CSB-EP008424HUa0
Abbreviation	Recombinant Human FAP protein, partial
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.	Q12884
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Human Prolyl endopeptidase FAP(FAP),partial
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	LRPSRVHNSEENTMRALTLKDILNGTFSYKTFFPNWISGQEYLHQSADNNIVLY NIETGQSYTILSNRTMKSVNASNYGLSPDRQFVYLESDYSKLWRYSYTATYYIY DLSNGEFVRGNELPRPIQYLCWSPVGSKLAYVYQNNIYLKQRPGDPPFQITFN GRENKIFNGIPDWVYEEEMLATKYALWWSPNGKFLAYAEFNDTDIPVIAYSYY GDEQYPRTINIPYPKAGAKNPVVRIFIIDTTYPAYVGPQEVPVPAMIASSDYYFS WLTWVTDERVCLQWLKRVQNVSVLSICDFREDWQTWDCPKTQEHIEESRTG WAGGFFVSTPVFSYDAISYYKIFSDKDGYKHIHYIKDTVENAIQITSGKWEAINIF RVTQDSLFYSSNEFEEYPGRRNIYRISIGSYPPSKKCVTCHLRKERCQYYTASF SDYAKYYALVCYGPGIPISTLHDGRTDQEIKILEENKELENALKNIQLPKEEIKKL EVDEITLWYKMILPPQFDRSKKYPLLIQVYGGPCSQSVRSVFAVNWISYLASKE GMVIALVDGRGTAFQGDKLLYAVYRKLGVYEVEDQITAVRKFIEMGFIDEKRIAI WGWSYGGYVSSLALASGTGLFKCGIAVAPVSSWEYYASVYTERFMGLPTKDD NLEHYKNSTVMARAEYFRNVDYLLIHGTADDNVHFQNSAQIAKALVNAQVDFQ AMWYSDQNHGLSGLSTNHLYTHMTHFLKQCFSLSD
Research Area	Cancer
Source	E.coli
Target Names	FAP
Expression Region	26-760aa
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	86.5 kDa

Protein Length Partial

Image



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

Description

The Recombinant human Prolyl endopeptidase FAP is produced in E. coli and exhibits a purity exceeding 85%, confirmed by SDS-PAGE analysis. This partial-length protein, spanning the 26-760aa region, is tagged with an N-terminal 6xHis-tag, enhancing its utility in research applications. This recombinant FAP is available in either liquid form or as a lyophilized powder, offering flexibility in experimental design.

FAP exhibits robust endopeptidase activity, cleaving peptide bonds within proteins, while its dipeptidyl peptidase activity is relatively weak [1]. This dual functionality allows FAP to participate in various biological processes, such as the activation of growth factors and the modulation of inflammatory responses [2][3].

FAP is predominantly expressed in the reactive stroma of tumors, making it an attractive target for cancer therapies. Its expression is upregulated in various cancers, including breast, colorectal, and pancreatic cancers, where it is associated with tumor progression and metastasis [4][5]. FAP not only contributes to the degradation of extracellular matrix components but also influences the behavior of fibroblasts and other stromal cells, thereby facilitating tumor growth and invasion [6][7].

References:
[1] C. Huang, C. Suen, C. Lin, C. Chien, H. Lee, K. Chunget al., Cleavage-site specificity of prolyl endopeptidase fap investigated with a full-length protein substrate, The Journal of Biochemistry, vol. 149, no. 6, p. 685-692, 2011. https://doi.org/10.1093/jb/mvr017
[2] D. Dunshee, T. Bainbridge, N. Kljavin, J. Zavala-Solorio, A. Schroeder, R. Chanet al., Fibroblast activation protein cleaves and inactivates fibroblast growth factor 21, Journal of Biological Chemistry, vol. 291, no. 11, p. 5986-5996, 2016. https://doi.org/10.1074/jbc.m115.710582
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[4] A. LeBeau, W. Brennen, S. Aggarwal, & S. Denmeade, Targeting the cancer

stroma with a fibroblast activation protein-activated promelittin protoxin, Molecular Cancer Therapeutics, vol. 8, no. 5, p. 1378-1386, 2009. https://doi.org/10.1158/1535-7163.mct-08-1170
[5] K. Lee, K. Jackson, V. Christiansen, C. Lee, J. Chun, & P. McKee, Antiplasmin-cleaving enzyme is a soluble form of fibroblast activation protein, Blood, vol. 107, no. 4, p. 1397-1404, 2006. https://doi.org/10.1182/blood-2005-08-3452
[6] K. Chung, S. Hsu, Y. Chu, M. Lin, W. Jiaang, R. Chenet al., Fibroblast activation protein (fap) is essential for the migration of bone marrow mesenchymal stem cells through rhoa activation, Plos One, vol. 9, no. 2, p. e88772, 2014. https://doi.org/10.1371/journal.pone.0088772
[7] K. Jackson, V. Christiansen, V. Yadav, R. Silasi?Mansat, F. Lupu, V. Awasthiet al., Suppression of tumor growth in mice by rationally designed pseudopeptide inhibitors of fibroblast activation protein and prolyl oligopeptidase, Neoplasia, vol. 17, no. 1, p. 43-54, 2015. https://doi.org/10.1016/j.neo.2014.11.002

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.