

FAP Protein, Human (HEK293, His)

Cat. No.:	HY-P72659
Synonyms:	Prolyl endopeptidase FAP; FAP; FAPA; DPPIV; SIMP; Fapalpha
Species:	Human
Source:	HEK293
Accession:	Q12884 (L26-D760)
Gene ID:	2191
Molecular Weight:	85-100 kDa

PROPERTIES

AA Sequence

L R P S R V H N S E	E N T M R A L T L K	D I L N G T F S Y K	T F F P N W I S G Q
E Y L H Q S A D N N	I V L Y N I E T G Q	S Y T I L S N R T M	K S V N A S N Y G L
S P D R Q F V Y L E	S D Y S K L W R Y S	Y T A T Y Y I Y D L	S N G E F V R G N E
L P R P I Q Y L C W	S P V G S K L A Y V	Y Q N N I Y L K Q R	P G D P P F Q I T F
N G R E N K I F N G	I P D W V Y E E E M	L A T K Y A L W W S	P N G K F L A Y A E
F N D T D I P V I A	Y S Y Y G D E Q Y P	R T I N I P Y P K A	G A K N P V V R I F
I I D T T Y P A Y V	G P Q E V P V P A M	I A S S D Y Y F S W	L T W V T D E R V C
L Q W L K R V Q N V	S V L S I C D F R E	D W Q T W D C P K T	Q E H I E E S R T G
W A G G F F V S T P	V F S Y D A I S Y Y	K I F S D K D G Y K	H I H Y I K D T V E
N A I Q I T S G K W	E A I N I F R V T Q	D S L F Y S S N E F	E E Y P G R R N I Y
R I S I G S Y P P S	K K C V T C H L R K	E R C Q Y Y T A S F	S D Y A K Y Y A L V
C Y G P G I P I S T	L H D G R T D Q E I	K I L E E N K E L E	N A L K N I Q L P K
E E I K K L E V D E	I T L W Y K M I L P	P Q F D R S K K Y P	L L I Q V Y G G P C
S Q S V R S V F A V	N W I S Y L A S K E	G M V I A L V D G R	G T A F Q G D K L L
Y A V Y R K L G V Y	E V E D Q I T A V R	K F I E M G F I D E	K R I A I W G W S Y
G G Y V S S L A L A	S G T G L F K C G I	A V A P V S S W E Y	Y A S V Y T E R F M
G L P T K D D N L E	H Y K N S T V M A R	A E Y F R N V D Y L	L I H G T A D D N V
H F Q N S A Q I A K	A L V N A Q V D F Q	A M W Y S D Q N H G	L S G L S T N H L Y
T H M T H F L K Q C	F S L S D		

Biological Activity

Measured by its ability to convert the substrate benzyloxycarbonyl-Gly-Pro-7-amido-4-methylcoumarin (Z-GP-AMC) to Z-Gly-Pro and 7-amino-4-methylcoumarin (AMC). The specific activity is >3884 pmol/min/μg.

Appearance

Solution

Formulation

Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, 20% Glycerol, pH 8.0.

Endotoxin Level

<1 EU/μg, determined by LAL method.

Reconstitution

N/A

Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background

FAP protein, a cell surface glycoprotein serine protease, plays a crucial role in extracellular matrix degradation and is involved in diverse cellular processes, including tissue remodeling, fibrosis, wound healing, inflammation, and tumor growth. Both the plasma membrane and soluble forms of FAP exhibit post-proline cleaving endopeptidase activity, demonstrating a preference for Ala/Ser-Gly-Pro-Ser/Asn/Ala consensus sequences on substrates such as alpha-2-antiplasmin SERPINF2 and SPRY2. FAP can degrade gelatin, heat-denatured type I collagen, and various other substrates. Additionally, it possesses dipeptidyl peptidase activity, hydrolyzing prolyl bonds in synthetic dipeptide substrates with a preference for specific amino acid sequences. In association with DPP4, PLAU, or integrins, the plasma membrane form of FAP participates in pericellular proteolysis of the extracellular matrix, promoting cell adhesion, migration, and invasion. FAP's multifaceted functions extend to tissue remodeling during development and wound healing. In malignant melanoma cancers, FAP enhances cell invasiveness towards the extracellular matrix and promotes glioma cell invasion through the brain parenchyma by degrading the proteoglycan brevican. While contributing to tumor growth progression by increasing angiogenesis, collagen fiber degradation, and apoptosis, FAP paradoxically acts as a tumor suppressor in melanocytic cells through the regulation of cell proliferation and survival in a serine protease activity-independent manner.

Caution: Product has not been fully validated for medical applications. For research use only.

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