FAP Protein, Human (Biotinylated, HEK293, His)

Cat. No.:	HY-P77521
Synonyms:	Prolyl endopeptidase FAP; FAP; FAPA; DPPIV; SIMP; Fapalpha
Species:	Human
Source:	HEK293
Accession:	Q12884-1 (L26-D760)
Gene ID:	2191
Molecular Weight:	Approximately 87.2 kDa.

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

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, PLAUR, 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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