

FAP Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	FAPA;Fapalpha;Fibroblast Activation Protein α ;Fap α ;SIMP;DPPIV;fibroblast activation protein, α ;fibroblast activation protein, alpha;DPPIVA;Fibroblast Activation Protein alpha
Protein Construction:	A DNA sequence encoding the Human FAP (Q12884-1) (Leu26-Asp760) was expressed with a N-terminal polyhistidine tag followed by an AVI tag.The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed. Predicted N terminal: His
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q12884-1
Molecular Weight:	88.23 kDa (predicted); 102.0 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Recombinant Human FAP Protein (His & Avi Tag), Biotinylated (Cat#TMPY-06915) at 1 μ g/mL (100 μ L/well) on Streptavidin precoated (5 μ g/mL, 100 μ L/well) plate can bind anti-FAP antibody, human IgG1, the EC50 is 0.2-1.0 ng/mL (QC tested).
Purity:	\geq 95 % as determined by SDS-PAGE. \geq 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Seprase, also known as 17 kDa melanoma membrane-bound gelatinase , Fibroblast activation protein alpha,

Integral membrane serine protease and FAP, is a single-pass type II membrane protein which belongs to the peptidase S9B family. Seprase / FAP is found in cell surface lamellipodia, invadopodia and on shed vesicles. Seprase / FAP appears to act as a proteolytically active 17-kDa dimer, consisting of two 97-kDa subunits. It is a member of the group type II integral serine proteases, which includes dipeptidyl peptidase IV (DPP4 / CD26) and related type II transmembrane prolyl serine peptidases, which exert their mechanisms of action on the cell surface. Seprase / FAP colocalized with DPP4 in invadopodia and lamellipodia of migratory activated endothelial cells in collagenous matrix. Seprase / FAP colocalized with DPP4 on endothelial cells of capillary-like microvessels but not large vessels within invasive breast ductal carcinoma. DPP4 and seprase exhibit multiple functions due to their abilities to form complexes with each other and to interact with other membrane-associated molecules. In association with DPP4, Seprase / FAP is involved in the pericellular proteolysis of the extracellular matrix (ECM), the migration and invasion of endothelial cells into the ECM. Seprase / FAP has a dual function in tumour progression. The proteolytic activity of Seprase has been shown to promote cell invasiveness towards the ECM and also to support tumour growth and proliferation. Seprase / FAP may have a role in tissue remodeling during development and wound healing, and may contribute to invasiveness in malignant cancers. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

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