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FAP Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP13766c

Specification

FAP Antibody (Center) Blocking peptide - Product Information

Primary Accession Q12884

FAP Antibody (Center) Blocking peptide - Additional Information

Gene ID 2191

Other Names
Prolyl endopeptidase FAP, 170 kDa melanoma membrane-bound gelatinase, Dipeptidyl peptidase FAP, Fibroblast activation protein alpha, FAPalpha, Serine integral membrane protease, SIMP, Surface-expressed protease, Seprase, Antiplasmin-cleaving enzyme FAP, soluble form, APCE, 3421-, FAP (HGNC:3590)

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13766c was selected from the Center region of FAP. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

FAP Antibody (Center) Blocking peptide - Protein Information

Name FAP (HGNC:3590)

Function
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 (PubMed:14751930, PubMed:16223769, PubMed:16480718, PubMed:16410248, PubMed:<a

href="http://www.uniprot.org/citations/17381073" target="_blank">17381073, PubMed:18095711, PubMed:21288888, PubMed:24371721). Degrade also gelatin, heat-denatured type I collagen, but not native collagen type I and IV, vitronectin, tenascin, laminin, fibronectin, fibrin or casein (PubMed:9065413, PubMed:2172980, PubMed:7923219, PubMed:10347120, PubMed:10455171, PubMed:12376466, PubMed:16223769, PubMed:16651416, PubMed:18095711). Also has 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 (PubMed:10347120, PubMed:10593948, PubMed:16175601, PubMed:16223769, PubMed:16651416, PubMed:16410248, PubMed:17381073, PubMed:21314817, PubMed:24371721, PubMed:24717288). Natural neuropeptide hormones for dipeptidyl peptidase are the neuropeptide Y (NPY), peptide YY (PYY), substance P (TAC1) and brain natriuretic peptide 32 (NPPB) (PubMed:21314817). 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.

Cellular Location

[Prolyl endopeptidase FAP]: Cell surface. Cell membrane; Single-pass type II membrane protein. Cell projection, lamellipodium membrane; Single-pass type II membrane protein. Cell projection, invadopodium membrane; Single-pass type II membrane protein. Cell projection, ruffle membrane; Single-pass type II membrane protein. Membrane; Single- pass type II membrane protein. Note=Localized on cell surface with lamellipodia and invadopodia membranes and on shed vesicles. Colocalized with DPP4 at invadopodia and lamellipodia membranes of migratory activated endothelial cells in collagenous matrix. Colocalized with DPP4 on endothelial cells of capillary-like microvessels but not large vessels within invasive breast ductal carcinoma. Anchored and enriched preferentially by integrin alpha- 3/beta-1 at invadopodia, plasma membrane protrusions that correspond to sites of cell invasion, in a collagen-dependent manner. Localized at plasma and ruffle membranes in a collagen-independent manner Colocalized with PLAUR preferentially at the cell surface of invadopodia membranes in a cytoskeleton-, integrin- and vitronectin- dependent manner. Concentrated at invadopodia membranes, specialized protrusions of the ventral plasma membrane in a fibrobectin-dependent manner. Colocalizes with extracellular components (ECM), such as collagen fibers and fibronectin. [Isoform 2]: Cytoplasm

Tissue Location
Expressed in adipose tissue. Expressed in the dermal fibroblasts in the fetal skin. Expressed in the granulation tissue of healing wounds and on reactive stromal fibroblast in epithelial cancers. Expressed in activated fibroblast-like synoviocytes from inflamed synovial tissues. Expressed in activated hepatic stellate cells (HSC) and myofibroblasts from cirrhotic liver, but not detected in normal liver. Expressed in glioma cells (at protein level) Expressed in glioblastomas and glioma cells. Isoform 1 and isoform 2 are expressed in melanoma, carcinoma and fibroblast cell lines

FAP Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

FAP Antibody (Center) Blocking peptide - Images

FAP Antibody (Center) Blocking peptide - Background

The protein encoded by this gene is a homodimeric integralmembrane gelatinase belonging to the serine protease family. It isselectively expressed in reactive stromal fibroblasts of epithelialcancers, granulation tissue of healing wounds, and malignant cellsof bone and soft tissue sarcomas. This protein is thought to beinvolved in the control of fibroblast growth orepithelial-mesenchymal interactions during development, tissuerepair, and epithelial carcinogenesis.

FAP Antibody (Center) Blocking peptide - References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Ospelt, C., et al. Arthritis Rheum. 62(5):1224-1235(2010)Stremenova, J., et al. Int. J. Oncol. 36(2):351-358(2010)Chen, H., et al. Exp. Mol. Pathol. 87(3):189-194(2009)Dohi, O., et al. Histopathology 55(4):432-440(2009)