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Mouse Fap Blocking Peptide(N-term)

Synthetic peptide
Catalog # BP19697a

Specification

Mouse Fap Blocking Peptide(N-term) - Product Information

Primary Accession	P97321
Other Accession	NP_032012.1

Mouse Fap Blocking Peptide(N-term) - Additional Information

Gene ID 14089

Other Names
Prolyl endopeptidase FAP, Fap {ECO:0000312|MGI:MGI:109608}

Target/Specificity
The synthetic peptide sequence is selected from aa 30-41 of MOUSE Fap

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.

Mouse Fap Blocking Peptide(N-term) - Protein Information

Name Fap {ECO:0000312|MGI:MGI:109608}

Function
Cell surface glycoprotein serine protease that participates in extracellular matrix degradation and involved in many cellular processes including tissue remodeling,

Mouse Fap Blocking Peptide(N-term) - Background

In association with DPP4 is involved in the pericellular proteolysis of the extracellular matrix (ECM), the migration and invasion of endothelial cells into the ECM (By similarity). May have a role in tissue remodeling during development and wound healing, and contribute to invasiveness in malignant cancers.

Mouse Fap Blocking Peptide(N-term) - References

Wen, Y., et al. Cancer Sci. 101(11):2325-2332(2010)
Santos, A.M., et al. J. Clin. Invest. 119(12):3613-3625(2009)
Kennedy, A., et al. Int. J. Cancer 124(1):27-35(2009)
Hughes, D.S., et al. BMC Dev. Biol. 9, 30 (2009) :
Cheng, J.D., et al. Mol. Cancer Ther. 4(3):351-360(2005)

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. Degrade also gelatin, heat-denatured type I collagen, but not native collagen type I and IV, vibronectin, tenascin, laminin, fibronectin, fibrin or casein. 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. Natural neuropeptide hormones for dipeptidyl peptidase are the neuropeptide Y (NPY), peptide YY (PYY), substance P (TAC1) and brain natriuretic peptide 32 (NPPB). 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 {ECO:0000250|UniProtKB:Q12884}; Single-pass type II membrane protein. Cell projection, lamellipodium membrane {ECO:0000250|UniProtKB:Q12884}; Single-pass type II membrane protein. Cell projection, invadopodium membrane {ECO:0000250|UniProtKB:Q12884}; Single-pass type II membrane protein. Cell projection, ruffle membrane {ECO:0000250|UniProtKB:Q12884}; Single-pass type II membrane protein.

Membrane {ECO:0000250|UniProtKB:Q12884}; 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. {ECO:0000250|UniProtKB:Q12884}

Tissue Location
Expressed strongly in uterus, pancreas, submaxillary gland and skin, less in lymph node, ovary, skeletal muscle, adrenal and bone marrow. Expressed in reactive stromal fibroblast in epithelial cancers. Expressed in melanocytes but not melanomas (at protein level). Detected in fibroblasts, in placenta, uterus, embryos from day 7-19 and in newborn mice (P1)

Mouse Fap Blocking Peptide(N-term) - Protocols

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

- Blocking Peptides