10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MMP24 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6205a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9Y5R2
Other Accession	Q99PW6, Q9R0S2, NP_006681
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2041/2042
Calculated MW	73231
Antigen Region	396-425

Additional Information

Gene ID	10893
Other Names	Matrix metalloproteinase-24, MMP-24, 3424-, Membrane-type matrix metalloproteinase 5, MT-MMP 5, MTMMP5, Membrane-type-5 matrix metalloproteinase, MT5-MMP, MT5MMP, Processed matrix metalloproteinase-24, MMP24, MT5MMP
Target/Specificity	This MMP24 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 396-425 amino acids from the Central region of human MMP24.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MMP24 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MMP24

Synonyms	MT5MMP
Function	Metalloprotease that mediates cleavage of N-cadherin (CDH2) and acts as a regulator of neuro-immune interactions and neural stem cell quiescence. Involved in cell-cell interactions between nociceptive neurites and mast cells, possibly by mediating cleavage of CDH2, thereby acting as a mediator of peripheral thermal nociception and inflammatory hyperalgesia. Key regulator of neural stem cells quiescence by mediating cleavage of CDH2, affecting CDH2-mediated anchorage of neural stem cells to ependymocytes in the adult subependymal zone, leading to modulate their quiescence. May play a role in axonal growth. Able to activate progelatinase A. May also be a proteoglycanase involved in degradation of proteoglycans, such as dermatan sulfate and chondroitin sulfate proteoglycans. Cleaves partially fibronectin, but not collagen type I, nor laminin (By similarity).
Cellular Location	[Matrix metalloproteinase-24]: Cell membrane; Single-pass type I membrane protein. Golgi apparatus, trans-Golgi network membrane; Single-pass type I membrane protein. Note=Recycled back to the plasma membrane through the trans-Golgi network via interaction with APBA3
Tissue Location	Predominantly expressed in brain, kidney, pancreas and lung. Overexpressed in a series of brain tumors, including astrocytomas and glioblastomas.

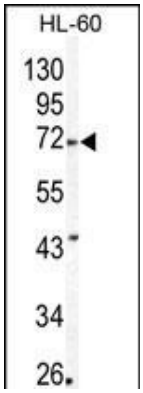
Background

Proteins of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. Most MMPs are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. However, MMP24 is a member of the membrane-type MMP (MT-MMP) subfamily; each member of this subfamily contains a potential transmembrane domain suggesting that these proteins are expressed at the cell surface rather than secreted. This protein activates MMP2 by cleavage. The gene has previously been referred to as MMP25 but has been renamed matrix metalloproteinase 24 (MMP24).

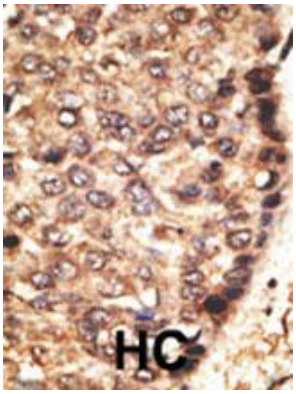
References

Jung, M., et al., Prostate 55(2):89-98 (2003).
Kajita, M., et al., FEBS Lett. 457(3):353-356 (1999).
Llano, E., et al., Cancer Res. 59(11):2570-2576 (1999).
Nagase, H., et al., J. Biol. Chem. 274(31):21491-21494 (1999).
Kinoh, H., et al., Cytogenet. Cell Genet. 87 (1-2), 97-98 (1999).

Images



Western blot analysis of MMP24 Antibody (Center) (Cat.#AP6205a) in HL60 cell line lysates (35ug/lane). MMP24 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.