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HtrA1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1331A

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q92743
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	51287
Antigen Region	116-147

Additional Information

Gene ID	5654
Other Names	Serine protease HTRA1, 3421-, High-temperature requirement A serine peptidase 1, L56, Serine protease 11, HTRA1, HTRA, PRSS11
Target/Specificity	This HtrA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 116-147 amino acids from the N-terminal region of human HtrA1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 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	HtrA1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HTRA1
Synonyms	HTRA, PRSS11
Function	Serine protease with a variety of targets, including extracellular matrix proteins such as fibronectin. HTRA1-generated fibronectin fragments further

induce synovial cells to up-regulate MMP1 and MMP3 production. May also degrade proteoglycans, such as aggrecan, decorin and fibromodulin. Through cleavage of proteoglycans, may release soluble FGF-glycosaminoglycan complexes that promote the range and intensity of FGF signals in the extracellular space. Regulates the availability of insulin-like growth factors (IGFs) by cleaving IGF- binding proteins. Inhibits signaling mediated by TGF-beta family members. This activity requires the integrity of the catalytic site, although it is unclear whether TGF-beta proteins are themselves degraded. By acting on TGF-beta signaling, may regulate many physiological processes, including retinal angiogenesis and neuronal survival and maturation during development. Intracellularly, degrades TSC2, leading to the activation of TSC2 downstream targets.

Cellular Location

Cell membrane. Secreted Cytoplasm, cytosol. Note=Predominantly secreted (PubMed:15208355). Also found associated with the plasma membrane (PubMed:21297635).

Tissue Location

Widely expressed, with strongest expression in placenta (at protein level). Secreted by synovial fibroblasts. Up- regulated in osteoarthritis and rheumatoid arthritis synovial fluids and cartilage as compared with non-arthritic (at protein level)

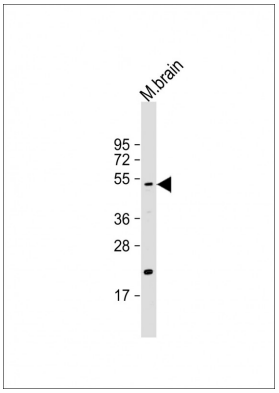
Background

HtrA1 a member of the trypsin family of serine proteases. This protein is a secreted enzyme that is proposed to regulate the availability of insulin-like growth factors (IGFs) by cleaving IGF-binding proteins. It has also been suggested to be a regulator of cell growth.

References

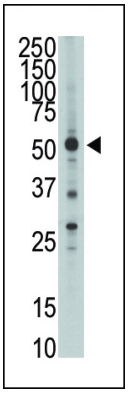
Howes, N., et al., Clin Gastroenterol Hepatol 2(3):252-261 (2004).
Chien, J., et al., Oncogene 23(8):1636-1644 (2004).
Hu, S.I., et al., J. Biol. Chem. 273(51):34406-34412 (1998).
Zumbrunn, J., et al., Genomics 45(2):461-462 (1997).
Zumbrunn, J., et al., FEBS Lett. 398 (2-3), 187-192 (1996).

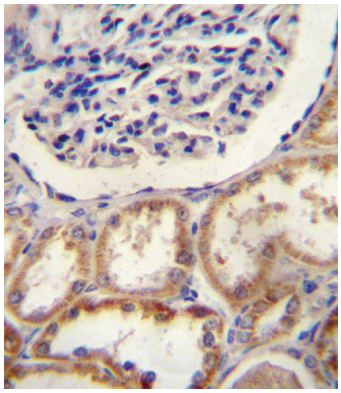
Images



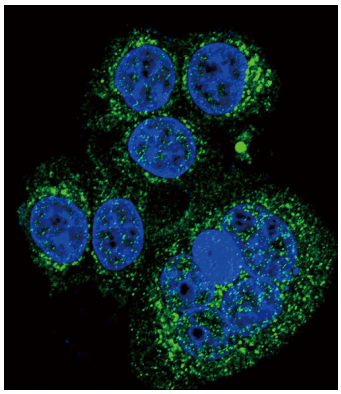
Anti-HtrA1 Antibody (N-term) at 1:2000 dilution + mouse brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 51 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

The anti-HtrA1 N-term Pab (Cat. #AP1331a) is used in Western blot to detect HtrA1in mouse brain tissue lysate.





HtrA1 Antibody (N-term) (Cat. #AP1331a)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of HtrA1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of HtrA1 Antibody (N-term)(Cat#AP1331a) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).

Citations

- High-Temperature Requirement A1 (Htra1) - A Novel Regulator of Canonical Wnt Signaling.
- Identification of a novel HtrA1-susceptible cleavage site in human aggrecan: evidence for the involvement of HtrA1 in aggrecan proteolysis in vivo.