

HtrA (B-8): sc-377050

BACKGROUND

The human homolog of the *E. coli* HtrA gene product HtrA is identified in osteoarthritic cartilage and is repressed in SV40-transformed fibroblast. The gene encoding HtrA is highly conserved among mammalian species and belongs to the serine protease family. The HtrA protein contains an IGF-binding domain and exhibits endoproteolytic activity, including autocatalytic cleavage. HtrA is a secreted protein that is expressed in heterologous systems. HtrA plays a role in the degradation of denatured proteins and cell growth regulation. Human HtrA2 (also designated Omi) is a novel member of the HtrA serine protease family and is highly homologous to HtrA (also known as L56 and HtrA1). HtrA2 is a ubiquitously expressed nuclear protease that is capable of autoprolysis. The HtrA2 protein exists as two polypeptides and as an alternatively spliced form called D-Omi, which is predominately expressed in the kidney, colon and thyroid. Due to a modified PDZ domain, D-Omi does not interact with the known partner of HtrA2, the Mxi2 protein. Like HtrA, HtrA2 is involved in the degradation of aberrantly folded proteins during conditions of cellular stress, suggesting that it may possess a chaperone-like role under normal conditions.

REFERENCES

1. Zumburn, J. and Trueb, B. 1996. Primary structure of a putative serine protease specific for IGF-binding proteins. *FEBS Lett.* 398: 187-192.
2. Hu, S.I., et al. 1998. Human HtrA, an evolutionarily conserved serine protease identified as a differentially expressed gene product in osteoarthritic cartilage. *J. Biol. Chem.* 273: 34406-34412.
3. Gray, C.W., et al. 2000. Characterization of human HtrA2, a novel serine protease involved in the mammalian cellular stress response. *Eur. J. Biochem.* 267: 5699-5710.

CHROMOSOMAL LOCATION

Genetic locus: HTRA1 (human) mapping to 10q26.13.

SOURCE

HtrA (B-8) is a mouse monoclonal antibody raised against amino acids 386-480 mapping at the C-terminus of HtrA of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HtrA (B-8) is available conjugated to agarose (sc-377050 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377050 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377050 PE), fluorescein (sc-377050 FITC), Alexa Fluor® 488 (sc-377050 AF488), Alexa Fluor® 546 (sc-377050 AF546), Alexa Fluor® 594 (sc-377050 AF594) or Alexa Fluor® 647 (sc-377050 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377050 AF680) or Alexa Fluor® 790 (sc-377050 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

HtrA (B-8) is recommended for detection of HtrA of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HtrA siRNA (h): sc-43854, HtrA shRNA Plasmid (h): sc-43854-SH and HtrA shRNA (h) Lentiviral Particles: sc-43854-V.

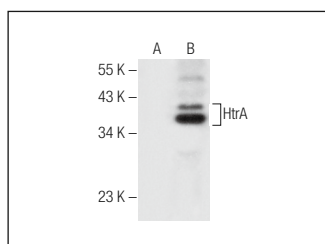
Molecular Weight of HtrA: 50 kDa.

Positive Controls: HtrA (h): 293T Lysate: sc-372521.

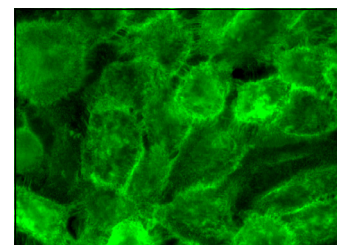
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HtrA (B-8): sc-377050. Western blot analysis of HtrA expression in non-transfected: sc-117752 (A) and human HtrA transfected: sc-372521 (B) 293T whole cell lysates.



HtrA (B-8): sc-377050. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Li, R. and Zhang, Q. 2015. HtrA1 may regulate the osteogenic differentiation of human periodontal ligament cells by TGF-β1. *J. Mol. Histol.* 46: 137-144.
2. Chen, D., et al. 2020. The lipid elongation enzyme ELOVL2 is a molecular regulator of aging in the retina. *Aging Cell* 19: e13100.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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