

HtrA2 (h): 293T Lysate: sc-172289

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 protein 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), a novel member of the HtrA serine protease family, is highly homologous to HtrA (also known as L56 and HtrA1). HtrA2 is a ubiquitously expressed nuclear protease that is capable of autoproteolysis. 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. Zumbrunn, 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.
4. Faccio, L., et al. 2000. Tissue-specific splicing of Omi stress-regulated endoprotease leads to an inactive protease with a modified PDZ motif. *Genomics* 68: 343-347.
5. Savopoulos, J.W., et al. 2000. Expression, purification, and functional analysis of the human serine protease HtrA2. *Protein Expr. Purif.* 19: 227-234.

CHROMOSOMAL LOCATION

Genetic locus: HTRA2 (human) mapping to 2p13.1.

PRODUCT

HtrA2 (h): 293T Lysate represents a lysate of human HtrA2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HtrA2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HtrA2 antibodies. Recommended use: 10-20 µl per lane.

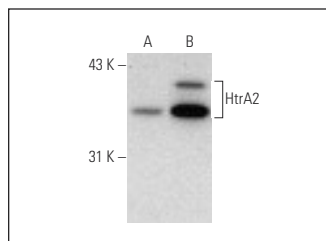
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HtrA2 (1B3): sc-58371 is recommended as a positive control antibody for Western Blot analysis of enhanced human HtrA2 expression in HtrA2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

DATA



HtrA2 (1B3): sc-58371. Western blot analysis of HtrA2 expression in non-transfected: sc-117752 (A) and human HtrA2 transfected: sc-172289 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.