

# Taspase 1 (F-7): sc-514676

## BACKGROUND

Taspase 1, also known as TASP1 or C20orf13, is a 420 amino acid endopeptidase which cleaves specific substrates following aspartate residues and is required for MLL (myeloid/lymphoid or mixed-lineage leukemia) processing and, ultimately, correct expression of the Hox A gene cluster. After translation, Taspase 1 is subject to autoproteolytic processing which results in the creation of two subunits, designated  $\alpha$  and  $\beta$ , which reassemble into a multimeric structure and are required for proper Taspase 1 activity. The gene encoding Taspase 1 maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, RING chromosome 20 epilepsy syndrome and Alagille syndrome.

## REFERENCES

1. Hsieh, J.J., Cheng, E.H. and Korsmeyer, S.J. 2003. Taspase 1: a threonine aspartase required for cleavage of MLL and proper HOX gene expression. *Cell* 115: 293-303.
2. Hsieh, J.J., Ernst, P., Erdjument-Bromage, H., Tempst, P. and Korsmeyer, S.J. 2003. Proteolytic cleavage of MLL generates a complex of N- and C-terminal fragments that confers protein stability and subnuclear localization. *Mol. Cell. Biol.* 23: 186-194.
3. Popovic, R. and Zeleznik-Le, N.J. 2005. MLL: how complex does it get? *J. Cell. Biochem.* 95: 234-242.
4. Khan, J.A., Dunn, B.M. and Tong, L. 2005. Crystal structure of human Taspase1, a crucial protease regulating the function of MLL. *Structure* 13: 1443-1452.
5. Zhou, H., Spicuglia, S., Hsieh, J.J., Mitsiou, D.J., Hoiby, T., Veenstra, G.J., Korsmeyer, S.J. and Stunnenberg, H.G. 2006. Uncleaved TFIIA is a substrate for Taspase 1 and active in transcription. *Mol. Cell. Biol.* 26: 2728-2735.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 608270. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Niehof, M. and Borlak, J. 2008. EPS15R, TASP1, and PRPF3 are novel disease candidate genes targeted by HNF4 $\alpha$  splice variants in hepatocellular carcinomas. *Gastroenterology* 134: 1191-1202.

## CHROMOSOMAL LOCATION

Genetic locus: TASP1 (human) mapping to 20p12.1; Tasp1 (mouse) mapping to 2 F3.

## SOURCE

Taspase 1 (F-7) is a mouse monoclonal antibody raised against amino acids 289-420 mapping at the C-terminus of Taspase 1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Taspase 1 (F-7) is recommended for detection of Taspase 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 Taspase 1 siRNA (h): sc-76632, Taspase 1 siRNA (m): sc-154081, Taspase 1 shRNA Plasmid (h): sc-76632-SH, Taspase 1 shRNA Plasmid (m): sc-154081-SH, Taspase 1 shRNA (h) Lentiviral Particles: sc-76632-V and Taspase 1 shRNA (m) Lentiviral Particles: sc-154081-V.

Molecular Weight of Taspase 1  $\alpha$  fragment: 28 kDa.

Molecular Weight of Taspase 1  $\beta$  fragment: 22 kDa.

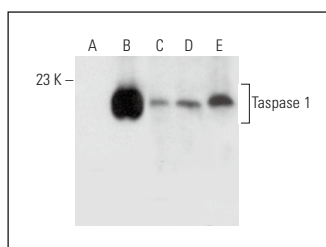
Molecular Weight of Taspase 1 precursor: 45 kDa.

Positive Controls: Taspase 1 (m2): 293T Lysate: sc-127633, Hep G2 cell lysate: sc-2227 or HL-60 whole cell lysate: sc-2209.

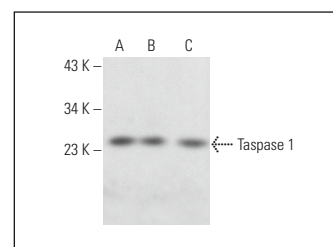
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



Taspase 1 (F-7): sc-514676. Western blot analysis of Taspase 1 expression in non-transfected 293T: sc-117752 (A), mouse Taspase 1 transfected 293T: sc-127633 (B), HeLa (C), HL-60 (D) and Hep G2 (E) whole cell lysates.



Taspase 1 (F-7): sc-514676. Western blot analysis of Taspase 1 expression in Hep G2 (A), A-431 (B) and MOLT-4 (C) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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