SANTA CRUZ BIOTECHNOLOGY, INC.

Taspase 1 (B-7): sc-390934

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The Power to Question

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 α and β, 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

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2. Hsieh, J.J., et al. 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., et al. 2005. Crystal structure of human Taspase1, a crucial protease regulating the function of MLL. Structure 13: 1443-1452.
5. Zhou, H., et al. 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/
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CHROMOSOMAL LOCATION

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

SOURCE

Taspase 1 (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 89-130 within an internal region of Taspase 1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-390934 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Taspase 1 (B-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 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).

Taspase 1 (B-7) is also recommended for detection of Taspase 1 in additional species, including equine, canine, bovine, porcine and avian.

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.

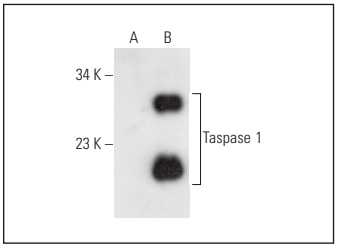
Molecular Weight of Taspase 1 α fragment: 28 kDa.

Molecular Weight of Taspase 1 β fragment: 22 kDa.

Molecular Weight of Taspase 1 precursor: 45 kDa.

Positive Controls: Taspase 1 (m2): 293T Lysate: sc-127633.

DATA



Taspase 1 (B-7): sc-390934. Western blot analysis of Taspase 1 expression in non-transfected: sc-117752 (**A**) and mouse Taspase 1 transfected: sc-127633 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Oelschläger, L., et al. 2023. Taspase 1 facilitates topoisomerase IIβ-mediated DNA double-strand breaks driving estrogen-induced transcription. Cells 12: 363.

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.

PROTOCOLS

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