

NALP1 (Nalpy1-4): sc-58550

BACKGROUND

NACHT-, LRR- and PYD-containing protein 1 (NALP1), also designated caspase recruitment domain protein 7, is a cytoplasmic protein. NALP1 contains a putative nucleotide binding site, a region of leucine-rich repeats, and death domain folds at both termini, providing protein/protein association functions such as caspase recruitment. NALP1 is involved in the innate immune response and is a component of the inflammasome. It forms cytoplasmic structures called death effector filaments and enhances APAF1 and cytochrome c-dependent activation of pro-caspase-9 and consecutive apoptosis. NALP1 is widely expressed in thymus, heart, spleen and peripheral blood leukocytes.

REFERENCES

- Hiller, S., Kohl, A., Fiorito, F., Herrmann, T., Wider, G., Tschopp, J., Grutter, M.G. and Wuthrich, K. 2003. NMR structure of the apoptosis- and inflammation-related NALP1 Pyrin domain. *Structure* 11: 1199-1205.
- Chamaillard, M., Girardin, S.E., Viala, J. and Philpott, D.J. 2003. Nods, NALPs and NAIP: intracellular regulators of bacterial-induced inflammation. *Cell. Microbiol.* 5: 581-592.
- Tschopp, J., Martinon, F. and Burns, K. 2003. NALPs: a novel protein family involved in inflammation. *Nat. Rev. Mol. Cell Biol.* 4: 95-104.
- Damiano, J.S., Oliveira, V., Welsh, K. and Reed, J.C. 2004. Heterotypic interactions among NACHT domains: implications for regulation of innate immune responses. *Biochem. J.* 381: 213-219.
- Sanz, C., Calasanz, M.J., Andreu, E., Richard, C., Prosper, F. and Fernandez-Luna, J.L. 2004. NALP1 is a transcriptional target for cAMP-response-element-binding protein (CREB) in myeloid leukaemia cells. *Biochem. J.* 384: 281-286.
- Liu, F., Lo, C.F., Ning, X., Kajkowski, E.M., Jin, M., Chiriac, C., Gonzales, C., Naureckiene, S., Lock, Y.W., Pong, K., Zaleska, M.M., Jacobsen, J.S., Silverman, S. and Ozenberger, B.A. 2004. Expression of NALP1 in cerebellar granule neurons stimulates apoptosis. *Cell. Signal.* 16: 1013-1021.

CHROMOSOMAL LOCATION

Genetic locus: NLRP1 (human) mapping to 17p13.2.

SOURCE

NALP1 (Nalpy1-4) is a mouse monoclonal antibody raised against full length NALP1 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

NALP1 (Nalpy1-4) is recommended for detection of NALP1 of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 NALP1 siRNA (h): sc-45479, NALP1 shRNA Plasmid (h): sc-45479-SH and NALP1 shRNA (h) Lentiviral Particles: sc-45479-V.

Molecular Weight of NALP1 uniprot human isoform α: 161 kDa.

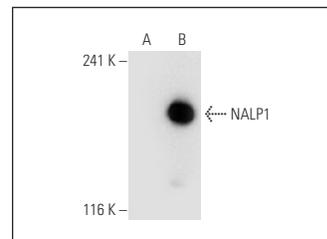
Molecular Weight of NALP1 uniprot human isoform β: 166 kDa.

Molecular Weight of NALP1 uniprot human isoform γ: 157 kDa.

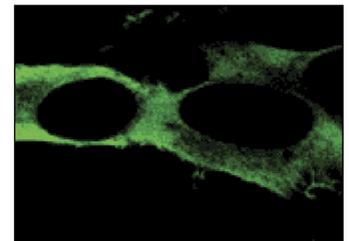
Molecular Weight of NALP1 uniprot human isoform δ: 162 kDa.

Positive Controls: NALP1 (h2): 293T Lysate: sc-116236.

DATA



NALP1 (Nalpy1-4): sc-58550. Western blot analysis of NALP1 expression in non-transfected: sc-117752 (A) and human NALP1 transfected: sc-116236 (B) 293T whole cell lysates.



NALP1 (Nalpy1-4): sc-58550. Immunofluorescence staining of methanol-fixed NALP1 transfected 293T cells showing cytoplasmic localization.

PROTOCOLS

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