

# NALP1 (F-1): sc-390133

## 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

1. Chamailard, M., et al. 2003. Nods, Nalps and Naip: intracellular regulators of bacterial-induced inflammation. *Cell. Microbiol.* 5: 581-592.
2. Tschopp, J., et al. 2003. NALPs: a novel protein family involved in inflammation. *Nat. Rev. Mol. Cell Biol.* 4: 95-104.

## CHROMOSOMAL LOCATION

Genetic locus: Nlrp1a/Nlrp1b/Nlrp1c-ps (mouse) mapping to 11 B4.

## SOURCE

NALP1 (F-1) is a mouse monoclonal antibody raised against amino acids 181-270 mapping within an internal region of NALP1a of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NALP1 (F-1) is available conjugated to agarose (sc-390133 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390133 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390133 PE), fluorescein (sc-390133 FITC), Alexa Fluor® 488 (sc-390133 AF488), Alexa Fluor® 546 (sc-390133 AF546), Alexa Fluor® 594 (sc-390133 AF594) or Alexa Fluor® 647 (sc-390133 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390133 AF680) or Alexa Fluor® 790 (sc-390133 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

NALP1 (F-1) is recommended for detection of NALP1a, NALP1b and NALP1c of mouse 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 NALP1 siRNA (m): sc-63287, NALP1 shRNA Plasmid (m): sc-63287-SH and NALP1 shRNA (m) Lentiviral Particles: sc-63287-V.

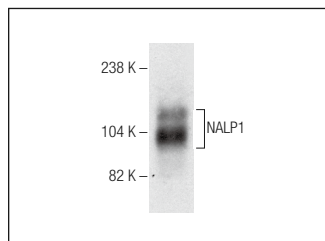
Molecular Weight of NALP1 mouse and rat isoforms: 134 kDa.

Positive Controls: I-11.15 whole cell lysate: sc-364370.

## STORAGE

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

## DATA



NALP1 (F-1): sc-390133. Western blot analysis of NALP1 expression in I-11.15 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Guo, X., et al. 2017. Ablation of  $\beta,\beta$ -carotene-9',10'-oxygenase 2 remodels the hypothalamic metabolome leading to metabolic disorders in mice. *J. Nutr. Biochem.* 46: 74-82.
2. Su, H., et al. 2018. *Mycobacterium tuberculosis* PPE60 antigen drives Th1/Th17 responses via Toll-like receptor 2-dependent maturation of dendritic cells. *J. Biol. Chem.* 293: 10287-10302.
3. Wang, J., et al. 2020. BPTES inhibits anthrax lethal toxin-induced inflammatory response. *Int. Immunopharmacol.* 85: 106664.
4. Fann, D.Y., et al. 2020. CD137 Ligand-CD137 interaction is required for inflammasome-associated brain injury following ischemic stroke. *Neuromolecular Med.* 22: 474-483.
5. Poh, L., et al. 2021. Intermittent fasting attenuates inflammasome-associated apoptotic and pyroptotic death in the brain following chronic hypoperfusion. *Neurochem. Int.* 148: 105109.
6. Jain, S., et al. 2021. The impact of caspase-1 deletion on apoptosis and acute kidney injury in a murine transplant model. *Cell. Signal.* 85: 110039.
7. Poh, L., et al. 2021. AIM2 inflammasome mediates apoptotic and pyroptotic death in the cerebellum following chronic hypoperfusion. *Exp. Neurol.* 346: 113856.
8. Poh, L., et al. 2021. AIM2 inflammasome mediates hallmark neuropathological alterations and cognitive impairment in a mouse model of vascular dementia. *Mol. Psychiatry* 26: 4544-4560.
9. Du, H., et al. 2022. Ablation of GSDMD attenuates neurological deficits and neuropathological alterations after traumatic brain injury. *Front. Cell. Neurosci.* 16: 915969.
10. Zhao, Z., et al. 2022. Early pregnancy modulates expression of the nod-like receptor family in lymph nodes of ewes. *Animals* 12: 3285.

## RESEARCH USE

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