SANTA CRUZ BIOTECHNOLOGY, INC.

NALP2 (E-5): sc-365935

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NALP2 (PAN1, PYPAF2) is a 1,062 amino acid protein that catalyzes the suppression of TNF- and CD40-induced NFKB1 activity at the level of the IKK complex by inhibiting NFKBIA degradation induced by TNF. When associated with PYCARD, NALP2 activates CASP1, which leads to the secretion of mature proinflammatory cytokine IL1B. As a putative member of the inflammasome, a protein complex which also includes PYCARD, CARD8 and CASP1, NALP2 may be involved in the activation of proinflammatory caspases. NAPL2 shows predominant expression in lung, placenta and thymus tissues, and demonstrates lower levels of expression in ovary, intestine and brain tissues. NAPL2 contains 1 DAPIN domain, 9 LRR (leucine-rich repeats) and 1 NACHT domain. The DAPIN domain is crucial for the suppression of NFKB1 activation and for inducing IL1B secretion in collaboration with caspase-1.

REFERENCES

1. Moricca, G., et al. 1981. Neuroadenolysis of the pituitary. Acta Anaesthesiol. Belg. 32: 87-99.
2. Trouwborst, A., et al. 1984. Mechanism of neuroadenolysis of the pituitary for cancer pain control. Appl. Neurophysiol. 47: 97-110.
3. Yanagida, H., et al. 1984. Relief of cancer pain in man: alcohol-induced neuroadenolysis vs. electrical stimulation of the pituitary gland. Pain 19: 133-141.
4. Morimoto, M., et al. 1991. Diffusion of alcohol upon application of neuroadenolysis of the pituitary gland (NALP). An experimental study using HRP and WGA-HRP in the cat. Fukuoka Igaku Zasshi 82: 475-479.
5. Bruey, J.M., et al. 2004. PAN1/NALP2/PYPAF2, an inducible inflammatory mediator that regulates NFκB and caspase-1 activation in macrophages. J. Biol. Chem. 279: 51897-51907.
6. Drygin, D., et al. 2005. Induction of Toll-like receptors and NALP/PAN/PYPAF family members by modified oligonucleotides in lung epithelial carcinoma cells. Oligonucleotides 15: 105-118.

CHROMOSOMAL LOCATION

Genetic locus: NLRP2 (human) mapping to 19q13.42.

SOURCE

NALP2 (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 159-193 near the N-terminus of NALP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-365935 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

NALP2 (E-5) is recommended for detection of all isoforms of NALP2 of 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).

Suitable for use as control antibody for NALP2 siRNA (h): sc-61143, NALP2 shRNA Plasmid (h): sc-61143-SH and NALP2 shRNA (h) Lentiviral Particles: sc-61143-V.

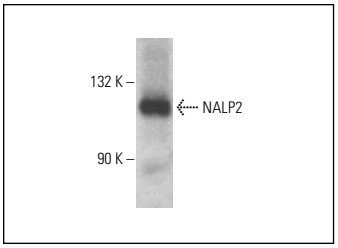
Molecular Weight of NALP2: 121 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

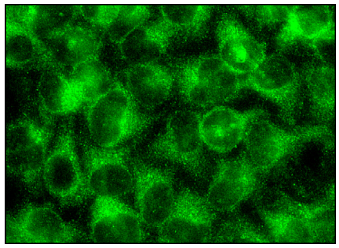
RECOMMENDED SUPPORT REAGENTS

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



NALP2 (E-5): sc-365935. Western blot analysis of NALP2 expression in K-562 whole cell lysate.



NALP2 (E-5): sc-365935. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Han, X., et al. 2019. Small molecule-driven NLRP3 inflammation inhibition via interplay between ubiquitination and autophagy: implications for Parkinson disease. Autophagy 15: 1860-1881.
2. Zhang, M., et al. 2021. Glucagon-like peptide-1 analogs mitigate neuroinflammation in Alzheimer's disease by suppressing NLRP2 activation in astrocytes. Mol. Cell. Endocrinol. 542: 111529.

RESEARCH USE

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