SANTA CRUZ BIOTECHNOLOGY, INC.

FAN (N-19): sc-6336

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tumor necrosis factor (TNF) is a pleiotropic cytokine whose function is mediated through two distinct cell surface receptors. These receptors, designated TNF-R1 and TNF-R2, are expressed on most cell types. The majority of TNF functions are primarily mediated through TNF-R1. FAN (for factor associated with neutral sphingomyelinase (N-SMase) activation) is an intermediate protein that interacts with TNF-R1 to initiate TNF signaling events. FAN binds to TNF-R1 at the cytoplasmic NSD (N-SMase activating domain), which results in the initiation of the N-SMase pathway. N-SMase has been shown to be involved in TNF-induced Raf-1 activation. FAN contains four carboxy terminal WD-repeat domains which appear to be involved in protein-protein interaction. The FAN WD-repeats may mediate the interaction between FAN and TNF-R1.

REFERENCES

1. Goeddel, D.V., et al. 1986. Tumor necrosis factors: gene structure and biological activities. Cold Spring Harbor Symp. Quant. Biol. 51: 597-609.
2. Espevik, T., et al. 1990. Characterization of binding and biological effects of monoclonal antibodies against a human tumor necrosis factor receptor. J. Exp. Med. 171: 415-426.
3. Smith, C.A., et al. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation, and death. Cell 76: 959-962.
4. Hsu, H., et al. 1995. The TNF receptor 1-associated protein TRADD signals cell death and NF-κB activation. Cell 81: 495-504.
5. Belka, C., et al. 1995. Tumor necrosis factor (TNF)-α activates c-Raf-1 kinase via the p55 TNF receptor engaging neutral sphingomyelinase. EMBO J. 14: 1156-1165.

CHROMOSOMAL LOCATION

Genetic locus: NSMAF (human) mapping to 8q12.1; Nsmaf (mouse) mapping to 4 A1.

SOURCE

FAN (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of FAN of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6336 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

FAN (N-19) is recommended for detection of FAN of mouse, rat and 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).

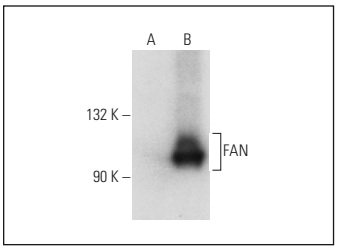
Suitable for use as control antibody for FAN siRNA (h): sc-63326, FAN siRNA (m): sc-63327, FAN shRNA Plasmid (h): sc-63326-SH, FAN shRNA Plasmid (m): sc-63327-SH, FAN shRNA (h) Lentiviral Particles: sc-63326-V and FAN shRNA (m) Lentiviral Particles: sc-63327-V.

Positive Controls: FAN (h): 293T Lysate: sc-115763.

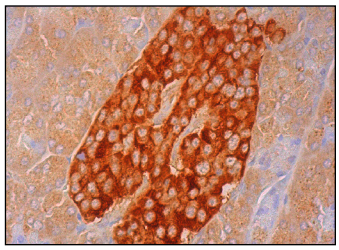
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



FAN (N-19): sc-6336. Western blot analysis of FAN expression in non-transfected: sc-117752 (**A**) and human FAN transfected: sc-115763 (**B**) 293T whole cell lysates.



FAN (N-19): sc-6336. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

SELECT PRODUCT CITATIONS

1. Tcherkasowa, A.E., et al. 2002. Interaction with factor associated with neutral sphingomyelinase activation, a WD motif-containing protein, identifies receptor for activated C-kinase 1 as a novel component of the signaling pathways of the p55 TNF receptor. J. Immunol. 169: 5161-5170.

RESEARCH USE

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