

NTAL (F-9): sc-398825

BACKGROUND

Non-T cell activation linker (NTAL), a transmembrane adaptor protein, is also designated membrane-associated adapter molecule, Williams-Beuren syndrome chromosome region 15 protein or LAB (linker of activated B cells). NTAL is present in membrane microdomains (rafts) of B cells, NK cells and myeloid cells, and in monocytes and mast cells, but not in resting T lymphocytes. NTAL becomes rapidly tyrosine-phosphorylated upon cross-linking of the B cell receptor (BCR) or of high-affinity Fc γ and Fc ϵ receptors of myeloid cells and then associates with the cytoplasmic signaling molecules. NTAL is highly expressed in spleen, lymph node germinal centers and peripheral blood lymphocytes. Defects in the gene encoding for NTAL may cause the musculo-skeletal and cardio-vascular abnormalities that characterize the rare developmental disorder Williams-Beuren syndrome (WBS).

REFERENCES

1. Martindale, D.W., et al. 2000. Comparative genomic sequence analysis of the Williams syndrome region (LIMK1-RFC2) of human chromosome 7q11.23. *Mamm. Genome* 11: 890-898.
2. Janssen, E., et al. 2003. LAB: a new membrane-associated adaptor molecule in B cell activation. *Nat. Immunol.* 4: 117-123.
3. Koonpaew, S., et al. 2004. The importance of three membrane-distal tyrosines in the adaptor protein NTAL/LAB. *J. Biol. Chem.* 279: 11229-11235.
4. Tkaczyk, C., et al. 2004. NTAL phosphorylation is a pivotal link between the signaling cascades leading to human mast cell degranulation following Kit activation and Fc ϵ RI aggregation. *Blood* 104: 207-214.

CHROMOSOMAL LOCATION

Genetic locus: LAT2 (human) mapping to 7q11.23; Lat2 (mouse) mapping to 5 G2.

SOURCE

NTAL (F-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 42-63 within an N-terminal cytoplasmic domain of NTAL of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NTAL (F-9) is available conjugated to agarose (sc-398825 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398825 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398825 PE), fluorescein (sc-398825 FITC), Alexa Fluor[®] 488 (sc-398825 AF488), Alexa Fluor[®] 546 (sc-398825 AF546), Alexa Fluor[®] 594 (sc-398825 AF594) or Alexa Fluor[®] 647 (sc-398825 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398825 AF680) or Alexa Fluor[®] 790 (sc-398825 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398825 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NTAL (F-9) is recommended for detection of NTAL of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 NTAL siRNA (h): sc-62703, NTAL siRNA (m): sc-62704, NTAL shRNA Plasmid (h): sc-62703-SH, NTAL shRNA Plasmid (m): sc-62704-SH, NTAL shRNA (h) Lentiviral Particles: sc-62703-V and NTAL shRNA (m) Lentiviral Particles: sc-62704-V.

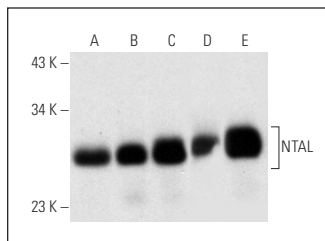
Molecular Weight of NTAL: 30 kDa.

Positive Control: U-937 cell lysate: sc-2239, THP-1 cell lysate: sc-2238 or AML-193 whole cell lysate: sc-364182.

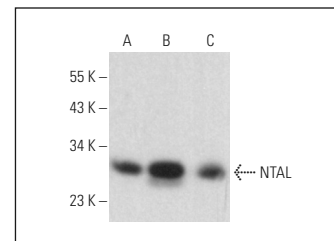
RECOMMENDED SUPPORT REAGENTS

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



NTAL (F-9): sc-398825. Western blot analysis of NTAL expression in U-937 (A), THP-1 (B), AML-193 (C), Raji (D) and HL-60 (E) whole cell lysates.



NTAL (F-9): sc-398825. Western blot analysis of NTAL expression in THP-1 (A), HL-60 (B) and Daudi (C) whole cell lysates.

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.

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