

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NTAL in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 440005
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human NTAL Met1-Ala243 Accession # Q9GZY6
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

<p>Western Blot</p> <p>Detection of Human NTAL by Western Blot. Western blot shows lysates of Raji human Burkitt's lymphoma cell line and THP-1 human acute monocytic leukemia cell line. PVDF Membrane was probed with 1 µg/mL of Mouse Anti-Human NTAL Monoclonal Antibody (Catalog # MAB4066) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for NTAL at approximately 30 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Intracellular Staining by Flow Cytometry</p> <p>Detection of NTAL in THP-1 Human Cell Line by Flow Cytometry. THP-1 human acute monocytic leukemia cell line was stained with Mouse Anti-Human NTAL Monoclonal Antibody (Catalog # MAB4066, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Non-T cell activation linker (NTAL), also known as linker for activation of B cells (LAB), is a transmembrane adaptor protein involved in immunoreceptor signaling. NTAL is expressed in lipid raft microdomains of B cells, mast cells, monocytes and NK cells. Rapid tyrosine phosphorylation of NTAL occurs upon BCR aggregation in B cells, FcεRI aggregation and Kit activation in mast cells, and FcγRI aggregation in monocytes. Phosphorylated NTAL recruits signaling molecules such as Grb2, Gab1, and c-Cbl into receptor-signaling complexes. Defects in the NTAL gene may cause Williams-Beuren syndrome, a rare genetic disorder characterized by mild mental retardation, and abnormalities in the cardiovascular and musculo-skeletal systems.