

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse NTB-A/SLAMF6 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human NTB-A or recombinant mouse CD84 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 448318
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse NTB-A/SLAMF6 Glu31-Asn239 Accession # Q9ET39
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

NTB-A, also known as Ly108 and SLAMF6, is a 60 kDa type I transmembrane glycoprotein that belongs to the SLAM subgroup of the CD2 family (1). Mature mouse NTB-A consists of a 209 amino acid (aa) ECD with one Ig-like V-type and one Ig-like C2-type domain, a 23 aa transmembrane segment, and an 89 aa cytoplasmic domain with two immunoreceptor tyrosine-based switch motifs ITSMs (2). Within the ECD, mouse NTB-A shares 48% and 70% aa sequence identity with human and rat NTB-A, respectively. The ECD of mouse NTB-A shares 20%-34% aa sequence identity with comparable regions of mouse 2B4, BLAME, CD2F-10, CD84, CD229, CRACC, and SLAM. An alternatively spliced isoform diverges after the second ITSM (2). NTB-A is expressed on the surface of NK, T, and B lymphocytes as well as eosinophils (3-5). It interacts homophilically through weak associations between the Ig-V type domains (5-7). NTB-A functions as an activating coreceptor on NK and T cells (3, 5, 6, 8). Tyrosine phosphorylation in the membrane proximal ITSM enables specific association with EAT-2, an interaction that is required for NTB-A mediated cytotoxicity of NK cells (9). Phosphorylation-dependent NTB-A association with SAP is required for full production of NK cell IFN-γ (5, 9). This interaction is independent of EAT-2 binding and appears to involve the membrane distal ITSM (5, 9). NTB-A deficient mice show weakened Th2 responses and elevated levels of neutrophil-derived inflammatory mediators (10). On B cells, NTB-A modulates immunoglobulin class switching and the balance between tolerance and autoimmunity (5, 11). The isoform with the divergent C-terminal tail is overexpressed in B cells from lupus-prone mice (11).

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