# Human NTB-A/SLAMF6
# Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse $IgG_{2A}$ Clone # 292811

Catalog Number: FAB19081N

100 µg

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human NTB-A/SLAMF6 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) BLAME or rhCRACC is observed. |
| **Source** | Monoclonal Mouse $IgG_{2A}$ Clone # 292811 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human NTB-A/SLAMF6<br>Leu28-Lys225<br>Accession # Q96DU3 |
| **Conjugate** | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm |
| **Formulation** | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*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.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Flow Cytometry** | 0.25-1 µg/$10^6$ cells | Human peripheral blood lymphocytes |

## 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.**<br>● 12 months from date of receipt, 2 to 8 °C as supplied. |

## BACKGROUND

NTB-A (NK-T-B-antigen), 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 human NTB-A contains a 205 amino acid (aa) extracellular domain (ECD) with one Ig-like V-set and one Ig-like C2-set domain. It also contains a 21 aa transmembrane segment and an 84 aa cytoplasmic domain with two immunoreceptor tyrosine-based switch motifs (ITSMs) (2, 3). An alternately spliced isoform is truncated in the cytoplasmic domain and lacks the two ITSMs. Within the ECD, human NTB-A shares 48% aa sequence identity with mouse and rat NTB-A. The ECD of human NTB-A shares 19%-34% aa sequence identity with comparable regions of human 2B4, BLAME, CD2F-10, CD84, CD229, CRACC, and SLAM. NTB-A is expressed on the surface of NK, T, and B lymphocytes as well as eosinophils (2, 4, 5). It interacts homophilically through weak associations between the Ig-V domains (2, 5-7). NTB-A functions as an activating coreceptor on NK and T cells (2, 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 IFN-γ by NK cells (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).

**References:**


1. Veillette, A. (2006) Immunol. Rev. **214**:22.
2. Bottino, C. *et al.* (2001) J. Exp. Med. **194**:235.
3. Fraser, C.C. *et al.* (2002) Immunogenetics **53**:843.
4. Munitz, A. *et al.* (2005) J. Immunol. **174**:110.
5. Valdez, P.A. *et al.* (2004) J. Biol. Chem. **279**:18662.
6. Flaig, R.M. *et al.* (2004) J. Immunol. **172**:6524.
7. Cao, E. *et al.* (2006) Immunity **25**:559.
8. Stark, S. and C. Watzl (2006) Int. Immunol. **18**:241.
9. Eissmann, P. and C. Watzl (2006) J. Immunol. **177**:3170.
10. Howie, D. *et al.* (2005) J. Immunol. **174**:5931.
11. Kumar, K.R. *et al.* (2006) Science **312**:1665.




bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

# Human NTB-A/SLAMF6
# Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse $IgG_{2A}$ Clone # 292811

Catalog Number: FAB19081N

100 µg

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.



bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449