

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human NTB-A/SLAMF6 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant mouse NTB-A/SLAMF6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human NTB-A/SLAMF6 Leu28-Lys225 Accession # Q96DU3
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS		
Please Note: Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human NTB-A/SLAMF6 Fc Chimera (Catalog # 1908-NT)

PREPARATION AND STORAGE	
Reconstitution	Reconstitute at 0.2 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

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.