Mouse BTLA Antibody

Monoclonal Rat IgG_{2B} Clone # 753131

Catalog Number: MAB7600

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse BTLA in ELISA and Western Blot.
Source	Monoclonal Rat IgG_{2B} Clone # 753131
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse BTLA Met1-Pro176 Accession # Q7TSA3
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.

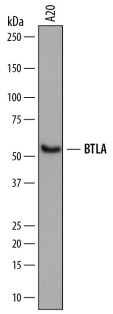
APPLICATIONS

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

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

DATA

Western Blot



Detection of Mouse BTLA by Western Blot. Western blot shows lysates of A20 mouse B cell lymphoma cell line. PVDF membrane was probed with 2 µg/mL of Rat Anti-Mouse BTLA Monoclonal Antibody (Catalog # MAB7600) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for BTLA at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 5.

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.** ● 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.

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BACKGROUND

B- and T-lymphocyte attenuator (BTLA; CD272) is a 70 kDa, Ig-superfamily, type I transmembrane glycoprotein that is structurally similar to the CD28 family of T cell co-stimulatory or coinhibitory molecules (1-3). Unlike CD28 family members, however, the BTLA extracellular Ig domain is an I-type rather than a V-type domain, and BTLA does not form homodimers (4). BTLA also differs from CD28 family members through the interaction of its Ig domain with the TNF superfamily member HVEM (herpesvirus entry mediator; TNFSF14) rather than with B7 family ligands (5). BTLA is a coinhibitory molecule expressed on T cells, B cells and, depending on the mouse strain, macrophages, dendritic and NK cells (6). Expression is low in naïve T cells and increased during antigen-specific induction of anergy. In B cells, BTLA is highest when cells are mature and naïve (6). BTLA apparently limits T cell numbers, since deletion of BTLA results in overproduction of T cells, especially $CD8^+$ memory T cells that are hyper-responsive to TCR crosslinking (7). The 305 amino acid (aa) BTLA contains a 29 aa signal sequence, a 153 aa extracellular domain (ECD), a 21 aa transmembrane sequence, and a 102 aa cytoplasmic domain. There are two ITIM motifs and three Tyr phosphorylation sites in the cytoplasmic tail that mediate inhibitory signaling (8, 9). The binding of the BTLA to HVEM does not preclude additional binding of a mammalian stimulatory HVEM ligand, either LIGHT or lymphotoxin-α to the complex (4). At least three alleles varying by up to ten extracellular amino acids occur in different mouse strains (6). The ECD of C57BL/6 BTLA shows 51%, 77% and 40% aa identity to that of human, rat and canine BTLA, respectively. A splice variant lacking the Ig domain, termed BTLAs, has been reported (3).

References:

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