Mouse BTLA Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: FAB3007G
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse BTLA in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human BTLA is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse BTLA Glu30-Gly176 (Pro41Glu, Thr45Asn, Thr47Lys, Gln52His, Arg55Trp, Gln63Glu, Cys85Trp) Accession # Q32MV9
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

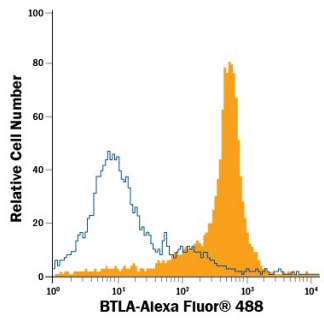
APPLICATIONS

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	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of BTLA in B220+ Mouse Splenocytes by Flow Cytometry. B220+ mouse splenocytes were stained with Goat Anti-Mouse BTLA Alexa Fluor® 488-conjugated Antigen Affinity-purified Polyclonal Antibody (Catalog # FAB3007G, filled histogram) or isotype control antibody (Catalog # Catalog # IC108G, open histogram). View our protocol for Staining Membrane-associated Proteins.

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.

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BACKGROUND

B- and T-lymphocyte Attenuator (BTLA), also known as 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 306 amino acid (aa) BTLA contains a 29 aa signal sequence, a 154 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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PRODUCT SPECIFIC NOTICES

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