SANTA CRUZ BIOTECHNOLOGY, INC.

BTLA (FL-289): sc-66820

BACKGROUND

B and T lymphocyte attenuator (BTLA) is an immunoglobulin domain-containing glycoprotein whose expression is induced during T cell activation. BTLA is similar to CTLA-4 and PD-1, all of which are co-inhibitory receptors belonging to the CD28 family. However, unlike CTLA-4 and PD-1, BTLA does not interact with B7-Ig family counter receptors. Rather, the herpesvirus entry mediator (HVEM), a TNF receptor, acts as a molecular switch that modulates T cell activation by propagating inhibitory signals through BTLA. The BTLA-HVEM interaction is conserved between mouse and human, suggesting that this system is an important pathway regulating lymphocyte activation.

REFERENCES

1. Watanabe, N., et al. 2003. BTLA is a lymphocyte inhibitory receptor with similarities to CTLA-4 and PD-1. Nat. Immunol. 4: 670-679.
2. Gonzalez, L.C., et al. 2005. A co-receptor interaction between the CD28 and TNF receptor family members B and T lymphocyte attenuator and herpesvirus entry mediator. Proc. Natl. Acad. Sci. USA 102: 1116-1121.
3. Cheung, T.C., et al. 2005. Evolutionarily divergent herpesviruses modulate T cell activation by targeting the herpesvirus entry mediator cosignaling pathway. Proc. Natl. Acad. Sci. USA 102: 13218-13223.
4. Tao, R., et al. 2005. Differential effects of B and T lymphocyte attenuator and programmed death-1 on acceptance of partially versus fully MHC-mismatched cardiac allografts. J. Immunol. 175: 5774-5782.
5. Krieg, C., et al. 2005. Functional analysis of B and T lymphocyte attenuator engagement on $CD4^+$ and $CD8^+$ T cells. J. Immunol. 175: 6420-6427.
6. Sedy, J.R., et al. 2005. B and T lymphocyte attenuator regulates T cell activation through interaction with herpesvirus entry mediator. Nat. Immunol. 6: 90-98.

CHROMOSOMAL LOCATION

Genetic locus: BTLA (human) mapping to 3q13.2; Btla (mouse) mapping to 16 B5.

SOURCE

BTLA (FL-289) is a rabbit polyclonal antibody raised against amino acids 1-289 representing full length BTLA of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

BTLA (FL-289) is recommended for detection of BTLA of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BTLA siRNA (h): sc-45458.

Molecular Weight of BTLA: 33 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.