



## ▶ BTLA (E-12): sc-34394

### 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 coreceptor 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<sup>+</sup> and CD8<sup>+</sup> 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 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of 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.

Blocking peptide available for competition studies, sc-34394 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### RESEARCH USE

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

### APPLICATIONS

BTLA (E-12) is recommended for detection of BTLA of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.