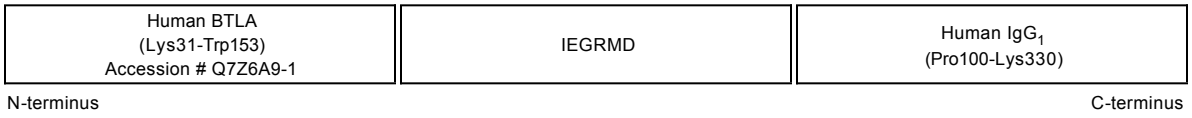
Recombinant Human BTLA Fc Chimera
aa 31-153

Catalog Number: 9509-BT

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human BTLA protein



N-terminal Sequence Analysis	Lys31
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	41 kDa

SPECIFICATIONS

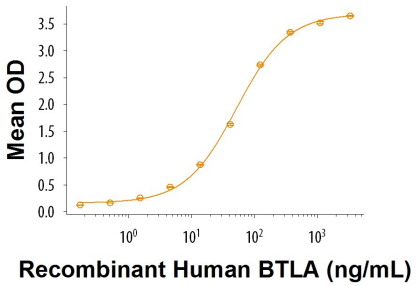
SDS-PAGE	52-61 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse HVEM/TNFRSF14 Fc Chimera (Catalog # 2516-HV) is immobilized at 0.5 µg/mL, 100 µL/well, the concentration of Recombinant Human BTLA Fc Chimera that produces 50% of the optimal binding response is 15-90 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



When Recombinant Mouse HVEM/TNFRSF14 Fc Chimera (Catalog # 2516-HV) is coated at 0.5 µg/mL (100 µL/well), Recombinant Human BTLA Fc Chimera (Catalog # 9509-BT) binds with an ED_{50} of 15-90 ng/mL.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Human BTLA Fc Chimera
aa 31-153

Catalog Number: 9509-BT

BACKGROUND

B- and T- lymphocyte attenuator (BTLA), also known as B- and T-lymphocyte-associated protein and CD272, is a type I transmembrane glycoprotein that belongs to the CD28 family of T cell co-stimulatory molecules (1-3). Mature human BTLA contains a 127 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane domain, and a 111 aa cytoplasmic domain. The ECD of human BTLA shares 42% and 44% aa identity with mouse and rat BTLA, respectively. Unlike other CD28 family members, the BTLA Ig domain in the ECD is of the I-type rather than V-type (4). BTLA is expressed on T cells, B cells, macrophages, dendritic cells and NK cells (5). BTLA is also unusual in its interaction with the TNF superfamily member HVEM rather than with B7 family ligands (6). Its expression is low in naïve T cells and increases during antigen-specific induction of anergy. BTLA apparently limits T cell numbers, since its deletion results in overproduction of T cells, especially $CD8^+$ memory T cells that are hyper-responsive to TCR cross-linking (7). Under the control of ROR γt and IL-7, BTLA regulates the homeostasis and inflammatory responses of gamma δT cells (8). The binding of BTLA and HVEM does not preclude the concurrent binding of other HVEM ligands such as LIGHT or Lymphotoxin-alpha (10).

References:

1. Murphy, K.M. et al. (2006) Nat. Rev. Immunol. **6**:671.
2. Croft, M. (2005) Trends. Immunol. **26**:292.
3. Watannabe, N. et al. (2003) Nat. Immunol. **4**:670.
4. Compaan, D.M. et al. (2005) J. Biol. Chem. **280**:39553.
5. Hurchia, M.A. et al. (2005) J. Immunol. **174**:3377.
6. Sedy, J. R. et al. (2005) Nat. Immunol. **6**:90.
7. Krieg, C. et al. (2007) Nat. Immunol. **8**:162.
8. Bekiaris, V. et al. (2013) Immunity **39**:1082.
9. Gavrieli, M. et al. (2003) Biochem. Biophys. Res. Commun. **312**:1236.
10. Cai G and Freeman GJ, (2009) Immunol Rev. **229**:244

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449