

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived BTLA protein		
	Cynomolgus Monkey BTLA (Met1-Leu150) Accession # XP_005548224	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus

N-terminal Sequence Lys31

Analysis

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 40.3 kDa

SPECIFICATIONS

SDS-PAGE 48-58 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, Recombinant Cynomolgus Monkey BTLA Fc Chimera binds with an ED₅₀ of 25-125 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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

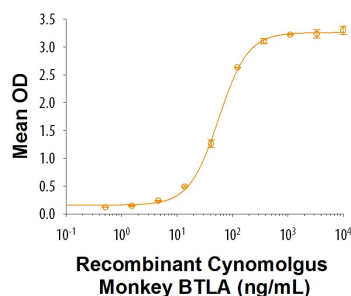
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage

- 12 months from date of receipt, ≤ -20 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, ≤ -20 °C under sterile conditions after reconstitution.

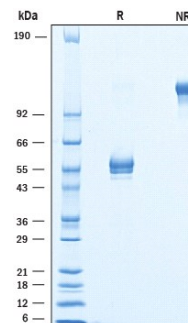
DATA

Binding Activity



When Recombinant Mouse HVEM/TNFRSF14 Fc Chimera (Catalog # 2516-HV) is immobilized at 0.5 µg/mL, Recombinant Cynomolgus Monkey BTLA Fc Chimera binds with an ED₅₀ of 25-125 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey BTLA was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 48-58 kDa and 100-115 kDa, respectively.

BACKGROUND

B- and T-lymphocyte attenuator (BTLA; CD272) is a 50-57 kDa type I transmembrane glycoprotein in the CD28 family of T cell co-stimulatory molecules (1-3). Mature cynomolgus BTLA contains a 127 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane sequence, and a 111 aa cytoplasmic domain. In humans, the cytoplasmic tail transmits inhibitory signaling via two ITIM motifs and three Tyr phosphorylation sites (4, 5). The ECD of cynomolgus BTLA shares 88% aa identity with that of human BTLA. A splice variant lacking the transmembrane domain has been reported in humans (6). Unlike other CD28 family members, the BTLA Ig domain in the ECD is of the I-type rather than V-type, and BTLA does not form homodimers (7). BTLA is also unusual in its interaction with the TNF superfamily member HVEM rather than with B7 family ligands (8). BTLA is expressed on T cells, B cells, macrophages, dendritic cells, and NK cells (9). Its expression is low in naïve T cells and increases during antigen-specific induction of energy. In B cells, BTLA expression is highest in mature naïve cells (9). 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 (10). Under the control of ROR γ t and IL-7, BTLA regulates the homeostasis and inflammatory responses of $\gamma\delta$ T cells (11). The binding of BTLA and HVEM does not preclude the concurrent binding of other HVEM ligands such as LIGHT or Lymphotoxin-alpha (12).

References:

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