

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived cynomolgus monkey B7-H7/HHLA2 protein
Ile21-Asn345, with a C-terminal 6-His tag
Accession # XP_005548285

N-terminal Sequence Analysis Ile21

Predicted Molecular Mass 38 kDa

SPECIFICATIONS

SDS-PAGE 62-70 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human Human TMIGD2/CD28H Fc Chimera (Catalog # 8316-TR) is immobilized at 1 µg/mL (100 µL/well), the concentration of Recombinant Cynomolgus Monkey B7-H7/HHLA2 (Catalog#10109-B7) that produces 50% of the optimal binding response is 0.2-1.2 µg/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.

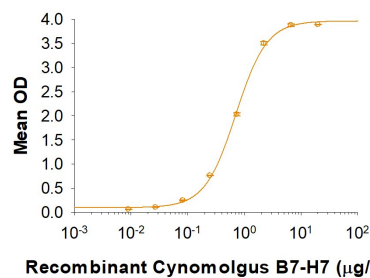
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage 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.

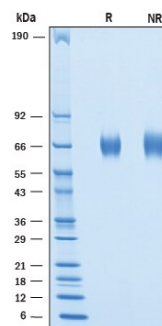
DATA

Binding Activity



When Recombinant Human TMIGD2/CD28H Fc Chimera (Catalog # 8316-TR) is coated at 2 µg/mL (100 µL/well), Recombinant Cynomolgus B7-H7/HHLA2 (Catalog # 10109-B7) binds with an ED₅₀ of 0.2-1.2 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey B7-H7/HHLA2 (Catalog#10109-B7) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 62-70 kDa.

BACKGROUND

B7-H7, also known as HHLA2 (HERV-H LTR-associating protein 2), is a member of the B7 family of immune regulatory proteins (1, 2). The mature human B7-H7 protein consists of a 322 amino acid (aa) extracellular domain (ECD) with three immunoglobulin-like domains, a 21 aa transmembrane segment, and a 49 aa cytoplasmic domain (3-5). Within the ECD, cynomolgus B7-H7 shares 90% aa sequence identity with human B7-H7. It is constitutively expressed on monocytes and is up-regulated by LPS and IFN-gamma stimulation. It is expressed on LPS/IFN-gamma treated B cells but not on resting B cells (5). B7-H7 binds to cell surface determinants on resting and mature T cells, B cells, and monocytes as well as on immature and mature dendritic cells (5). The receptor TMIGD2, commonly found in endothelial and epithelial cells, has also been identified as one of the receptors for B7-H7 (6). Soluble B7-H7 inhibits the proliferation of activated CD4⁺ and CD8⁺ T cells and their production of IFN-gamma, TNF-alpha, IL-5, IL-10, IL-13, IL-17A, and IL-22 (5).

References:

1. Zou, W. and L. Chen (2008) Nat. Rev. Immunol. **8**:467.
2. Bour-Jordan, H. *et al.* (2011) Immunol. Rev. **241**:180.
3. Mager, D.L. *et al.* (1999) Genomics **59**:255.
4. Flajnik, M.M. *et al.* (2012) Immunogenetics **64**:571.
5. Zhao, R. *et al.* (2013) Proc. Natl. Acad. Sci. USA **110**:9879.
6. Janakiram, M. *et al.* (2015) Oncoimmunology **4**:8.