

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived human ULBP-2 protein
Gly26-Ser217, with a C-terminal 6-His tag
Accession # Q9BZM5.1

N-terminal Sequence Analysis Gly26

Predicted Molecular Mass 23 kDa

SPECIFICATIONS

SDS-PAGE 25-35 kDa, under reducing conditions.

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human NKG2D/CD314 Fc Chimera (Catalog # 1299-NK) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human ULBP-2 His-tag (Catalog # 11196-UL) binds with an ED₅₀ of 7.50-60.0 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.

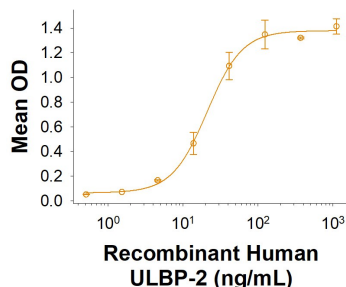
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage 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.

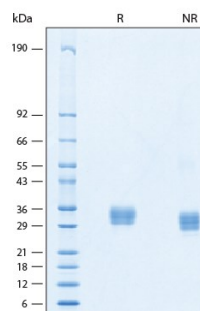
DATA

Binding Activity



Recombinant Human ULBP-2 His-tag Protein Binding Activity. When Recombinant Human NKG2D/CD314 Fc Chimera Protein (Catalog # 1299-NK) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human ULBP-2 His-tag Protein (Catalog # 11196-UL) binds with an ED₅₀ of 7.50-60.0 ng/mL.

SDS-PAGE



Recombinant Human ULBP-2 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human ULBP-2 His-tag Protein (Catalog # 11196-UL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 25-35 kDa.

BACKGROUND

ULBP-2 is a member of a family of cell-surface proteins that function as ligands for human NKG2D. ULBP-2 has also been described under the names RaeT1H (retinoic acid early transcript), NKG2DL2, and ALCAN-alpha. The name ULBP-2 derives from the original identification of three proteins, ULBP-1, -2, and -3, as ligands for the human cytomegalovirus glycoprotein UL16; they were designated UL16 binding proteins (ULBP). The gene for ULBP-2 resides in a cluster of ten related genes, six of which encode potentially functional glycoproteins. Amino acid sequence identity within this family ranges from 30-60%. These proteins are distantly related to MHC class I proteins, but they possess only the alpha 1 and alpha 2 Ig-like domains, and they have no capacity to bind peptide or interact with beta 2-microglobulin. Some family members, including ULBP-2, are anchored to the membrane via a GPI-linkage, whereas others have transmembrane domains. ULBP-2 and several other family members are known to bind to human NKG2D, an activating receptor expressed on NK cells, NKT cells, gamma δ T cells, and CD8+ alpha beta T cells. Engagement of NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. The ULBPs are expressed on some tumor cells and have been implicated in tumor surveillance.

References:

1. Cosman, D. *et al.* (2001) *Immunity* **14**:123.
2. Kubin, M. *et al.* (2001) *Eur. J. Immunol.* **31**:1428.
3. Sutherland, C. *et al.* (2002) *J. Immunol.* **168**:671.
4. Steinle, A. *et al.* (2001) *Immunogenetics* **53**:279.
5. Sutherland, C. *et al.* (2001) *Immunol. Rev.* **181**:185.
6. Pende, D. *et al.* (2002) *Cancer Res.* **62**:6178.
7. Radosavljevic, M. *et al.* (2002) *Genomics* **79**:114.
8. NKG2D and its Ligands (2002) www.rndsystems.com.