

## ULBP-2 Protein, Human, Recombinant (His & Avi)

### General Information

Synonyms:	ALCAN- $\alpha$ ;RAET1L;NKG2D ligand 2;ALCAN-alpha;N2DL2;ULBP-2/5/6;RAET1H;NKG2DL2;ULBP2
Protein Construction:	Gly26-Ser217
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BZM5
Molecular Weight:	24.6 kDa (predicted). Due to glycosylation, the protein migrates to 30-40 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Immobilized Human ULBP-2, His Tag at 5 $\mu$ g/ml (100 $\mu$ l/Well) on the plate. Dose response curve for Human NKG2D, hFc Tag with the EC50 of 2.8 $\mu$ g/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

ULBPs activate multiple signaling pathways in primary NK cells, resulting in the production of cytokines and chemokines. Binding of ULBPs ligands to NKG2D induces calcium mobilization and activation of the JAK2, STAT5, ERK and PI3K kinase/Akt signal transduction pathway, mediating natural killer cell cytotoxicity.

Reference

The bispecific immunoligand ULBP2-aCEA redirects natural killer cells to tumor cells and reveals potent anti-tumor activity against colon carcinoma[J]. International Journal of Cancer, 2014, 134(12):2829-2840.

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