Data Sheet (Cat.No.TMPY-02333)

TargetMol

ULBP-2 Protein, Human, Recombinant (His)

General Information

Synonyms:	ALCAN-α;UNQ463 / PRO791;NKG2DL2;ALCAN-alpha;UL16 binding protein 2;N2DL2;RAET1H
Protein Construction:	A DNA sequence encoding the human ULBP2 (Q9BZM5) (Met 1-Ser 217), without the pro peptide, was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gly 26
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BZM5
Molecular Weight:	23.2 kDa (predicted); 33 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Loaded Recombinant Human ULBP2 Protein, His Tag (Cat#TMPY-02333) on NTA Biosensor, can bind Recombinant Human NKG2D Protein, mFc Tag (Cat#TMPY-06827) with an affinity constant of 0.247 μM as determined in BLI assay (Sartorius Octet RED384) (QC tested).
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

NKG2D ligand 2, also known as N2DL-2, NKG2DL2, ALCAN-alpha, Retinoic acid early transcript 1H, UL16-binding protein 2, ULBP2 and N2DL2, is cell membrane protein that belongs to the MHC class I family. ULBP2 / N2DL-2 is expressed in various types of cancer cell lines and in the fetus, but not in normal tissues. ULBP2 / N2DL-2 is a ligand for the NKG2D receptor, together with at least ULBP1 and ULBP3. 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.

Reference

Cosman D. et al., 2001,Immunity 14:123-133.
Cerwenka A., et al., 2003, Tissue Antigens 61:335-343.
Chang,Y.T. et al., 2011, PLoS One. 6 (5):e20029.