Recombinant Human NKG2D ligand 1/ULBP1 Protein

Catalog No.: RP01454

Sequence Information

Species	Gene ID
Human	80329
Swiss Prot	**Tags**
Q9BZM6	C-His&Avi

Synonyms
ULBP1,N2DL-1,NKG2DL1,RAET1I

Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.
Calculated MW	**Observed MW**
24.92 kDa	Approximately 35 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

UL16-binding proteins (ULBP) or retinoic acid early transcripts-1 (RAET1) are ligands to the activating receptor, NKG2D. Ten members of the human ULBP /RAET1 gene family have been identified to encode for potentially functional proteins, and have tissue-specific expressions. ULBP1, also known as RAET1I and NKG2DL1, together with at least ULBP 2 and 3, are well-known ligands for NKG2D, and activate multiple signaling pathways in primary NK cells, resulting in the production of cytokines and chemokines. ULBP1 is expressed in T-cells, B-cells, erythroleukemia cell lines and in a wide range of tissues including heart, brain, lung, liver and bone marrow, as well as some tumor cells. As an unconventional member of the MHC class I family, ULBP1 function in immune responses, especially in cancer and infectious diseases. Unlike other ULBP members, ULBP1 is able to interact with soluble CMV glycoprotein UL16 in CMV infected cells. The interaction with UL16 blocked the interaction with the NKG2D receptor, and thus might escape the immune surveillance. Furthermore, UL16 also causes ULBP1 to be retained in the ER and cis-Golgi apparatus so that it does not reach the cell surface. The ULBP1 regulation may have implications for development of new therapeutic strategies against cancer cells.

Basic Information

Description
Recombinant Human NKG2D ligand 1/ULBP1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gly26-Pro215) of human ULBP1 (Accession #NP_079494.1) fused with a 6×His，Avi tag at the C-terminus.

Activity
Measured by its binding ability in a functional ELISA. Immobilized Human ULBP1 (Catalog: RP01454) at 2μg/mL (100 μL/well) can bind NKG2D with a linear range of 1.95-9.36ng/mL.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

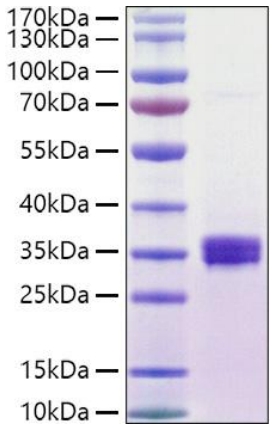
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

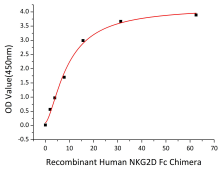
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Validation Data



Recombinant Human NKG2D ligand 1/ULBP1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



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