

Recombinant Human ULBP1/N2DL1 Protein (His & Fc Tag)

Catalog No. PKSH031493

Note: Centrifuge before opening to ensure complete recovery of vial contents.

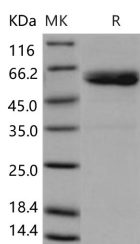
Description

| | |
|------------------------------------|--|
| Synonyms | RAET1I |
| Species | Human |
| Expression Host | HEK293 Cells |
| Sequence | Met 1-Gly 216 |
| Accession | NP_079494.1 |
| Calculated Molecular Weight | 50.4 kDa |
| Observed molecular weight | 55-60 kDa |
| Tag | C-His-Fc |
| Bioactivity | Immobilized human His-NKG2D (78-216) at 10 µg/ml (100 µl/well) can bind human ULBP1-Fch, The EC50 of human ULBP1-Fch is 0.04-0.08 µg/ml. |

Properties

| | |
|-----------------------|---|
| Purity | > 95 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 1.0 EU per µg of the protein as determined by the LAL method. |
| Storage | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Shipping | This product is provided as lyophilized powder which is shipped with ice packs. |
| Formulation | Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



> 95 % as determined by reducing SDS-PAGE.

Background

UL16-binding proteins (ULBP) or retinoic acid early transcripts-1 (RAET1) are ligands to the activating receptor;

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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.