Recombinant Human ULBP1/N2DL1 Protein (His Tag)

Catalog No. PKSH031492

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

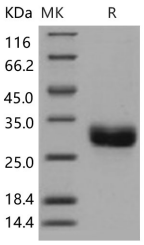
Description

Synonyms	RAET1I
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Gly 216
Accession	NP_079494.1
Calculated Molecular Weight	23.8 kDa
Observed molecular weight	28-32 kDa
Tag	C-His
Bioactivity	Immobilized human ULBP1-His at 10 μg/ml (100 μl/well) can bind human NKG2D, The EC50 of human NKG2D is 0.39-0.91 μg/ml.

Properties

Purity	> 98 % 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℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ 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



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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.

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