

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

Catalog Number:PKSH031493

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

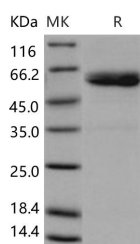
## Description

<b>Synonyms</b>	RAET1I
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Gly 216
<b>Accession</b>	NP_079494.1
<b>Calculated Molecular Weight</b>	50.4 kDa
<b>Observed molecular weight</b>	55-60 kDa
<b>Tag</b>	C-His-Fc
<b>Bioactivity</b>	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

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	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.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	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.
<b>Reconstitution</b>	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; 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

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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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