# Recombinant Human NKG2DL/ULBP-1 Protein (Fc Tag)



#### Catalog Number: PKSH032815

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

### **Description**

Synonyms NKG2D ligand 1;NKG2DL1;ALCAN-beta;Retinoic acid early transcript

1I;UL16-binding protein 1;ULBP1

Species Human

Expression Host

Sequence

Gly26-Pro215

Accession

Calculated Molecular Weight

Observed molecular weight

Tag

HEK293 Cells

Gly26-Pro215

49.4 kDa

58-70 kDa

C-Fc

# **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 a 0.2 μm filtered solution of PBS, pH 7.4.

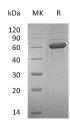
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

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

NKG2D ligand 1; also called ULBP1; is a member of UL16-binding protein (ULBP) family which has also been termed the retinoic acid early transcript 1 (RAET1) family. Unlike the classical MHC class I molecules and the MIC molecules possess  $\alpha$ 1;  $\alpha$ 2 and  $\alpha$ 3 domains; ULBP/RAET1 family members lack  $\alpha$ 3 domain. ULBP1 is recognized by the activating receptor NKG2D on the surface of cytotoxic natural killer (NK) and T cells; and then promotes the lysis of cells expressing ULBP1 which is important for the immune surveillance. ULBP1 and several other family members; ULBP2 and ULBP5; own the ability to bind the human cytomegalovirus (CMV) UL16 glycoprotein. The human CMV glycoprotein UL16 binds to intracellular ULBP1 and so inhibits its expression at the cell surface; which reduces the

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susceptibility of the virus-infected cell to cytotoxic destruction by NK cells. The expression of ULBP1 has been found on some tumor cells and is implicated in tumor surveillance.

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