Recombinant Human NKG2DL/ULBP-1 Protein (His Tag)

Catalog Number: PKSH032814

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

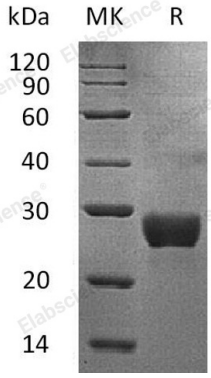
Description

Species	Human
Source	HEK293 Cells-derived Human NKG2DL;ULBP-1 protein Gly26-Pro215, with an C-terminal His
Calculated MW	23.3 kDa
Observed MW	25-30 kDa
Accession	Q9BZM6
Bio-activity	Not validated for activity

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 ℃. 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 a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 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

ULBP1; also known as RAET1I and NKG2DL1; is a member of the ULBP/RAET1 gene family. ULBP1 plays an important role in immune responses; especially in cancer and infectious diseases; and is well-known to bind to NKG2D together with at least ULBP 2 and 3. These proteins are distantly related to major histocompatibility class I (MHC I) molecules; possessing the alpha 1 and alpha 2 Ig-like domains; but lacking the alpha 3 domain. Unlike MHC Class I; they have no capacity to bind peptide or interact with beta2-microglobulin. It can activate multiple signaling pathways in primary NK cells; gamma delta T cells; and CD8+ alpha beta T cells; resulting in the production of cytokines and chemokines.ULBP1 is expressed in wide range of tissues including heart; brain; lung; liver; bone marrow and some tumor cells; T-cells; B-cells; As an unconventional member of the MHC class I family; 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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