



Recombinant Protein Technical Manual

Recombinant Human ULBP1/N2DL1 Protein (His Tag)(Active)
RPES3461

Product Data:

Product SKU: RPES3461

Size: 50µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_079494.1

Protein Information:

Molecular Mass: 23.8 kDa

AP Molecular Mass: 28-32 kDa

Tag: C-His

Bio-activity: 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.

Purity: > 98 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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

Reconstitution: Please refer to the printed manual for detailed information.

Application: Functional ELISA

Synonyms: RAET1I

Immunogen Information:

Sequence: Met 1-Gly 216

Background:

UL16-binding proteins (ULBP) or retinoic acid early transcripts (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 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.