

ULBP1 active protein

ULBP1 Protein, Human, Recombinant (His & hFc Tag)

CATALOG #
AAA257907

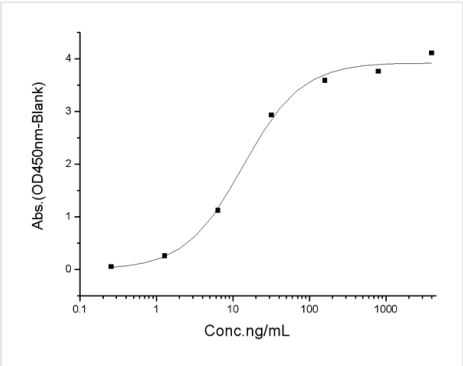
HOST
HEK293 Cells

PRODUCT SYNONYMS

ULBP1; ULBP1 Protein; Human; Recombinant (His & hFc Tag); Human ULBP1/RAET1/N2DL1 Protein (His & Fc Tag); RAET1I Protein; UL16 binding protein 1; ULBP1 active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-Gly21 6
Species	Human
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Gly 26
Tag	C-human IgG1-Fc & His
Protein Construction	A DNA sequence encoding the mature form of human ULBP1 (NP_079494.1)(Met 1-Gly 216) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Activity	Immobilized human His-NKG2D (78-216) at 2ug/ml (100uL/well) can bind human ULBP1-Fch. The EC50 of human ULBP1-Fch is 8-24ng/mL.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.



SDS-PAGE

Application Data
Immobilized human His-NKG2D (78-216) at 2 ug/ml (100 ul/well) can bind human ULBP1-Fch, The EC50 of human ULBP1-Fch is 8-24 ng/mL.

ADDITIONAL INFORMATION

Related Product Information for ULBP1 active protein	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 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.
References	1. Rolle, A. et al., 2003, J Immunol. 171(2): 902-908. 2. La³pez-Soto, A. et al., 2006, J Biol Chem. 281(41): 30419-30430. 3. Song, H. et al., 2006, Cell Immunol. 239(1): 22-30. 4. Eisele, G. et al., 2006, Brain. 129 (9): 2416-2425. 5. Romphruk, AV. et al., 2009, Immunogenetics. 61(9): 611-617. 6. Sutherland, C.L. et. al., 2002, J. Immunol. 168: 671-679.

NCBI AND UNIPROT INFORMATION

NCBI GI #	13376826
NCBI GeneID	80329
NCBI Accession #	NP_079494.1
NCBI GenBank Nucleotide #	NM_025218.2
UniProt Accession #	Q9BZM6; Q5VY81; Q8IZW3; Q8IZX6
Molecular Weight	27,997 Da
NCBI Official Full Name	NKG2D ligand 1
NCBI Official Synonym Full Names	UL16 binding protein 1
NCBI Official Symbol	ULBP1
NCBI Official Synonym Symbols	RAET1I
NCBI Protein Information	NKG2D ligand 1; N2DL-1; NKG2DL1; alcan-beta; UL16-binding protein 1; retinoic acid early transcript 1I
UniProt Protein Name	NKG2D ligand 1
UniProt Gene Name	ULBP1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/hek293-cells-active-protein/ulbp1/257907>