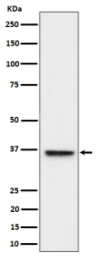
ULBP1 Antibody 30U90 / NKG2D Ligand ULBP1 Antibody [clone 30U90] (FY12334)

Catalog No.	Formulation	Size
FY12334	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

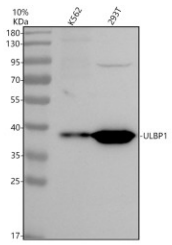
Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	30U90
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q9BZM6
Applications	Western blot: 1:500
Limitations	This ULBP1 Antibody 30U90 / NKG2D Ligand ULBP1 Antibody is available for research use only.



ULBP1 Antibody 30U90 WB Analysis of Human HeLa Cells. Western blot analysis of human HeLa cell lysate using NKG2D Ligand ULBP1 Antibody clone 30U90. A prominent immunoreactive band is detected at approximately 36 kDa, compared with the predicted molecular weight of 28 kDa. Post-translational glycosylation of ULBP1 may contribute to its higher apparent molecular weight.



ULBP1 Antibody 30U90 WB Analysis of Human K562 and 293T Cells. Western blot analysis of human K562 (lane 1) and 293T (lane 2) whole cell lysates using NKG2D Ligand ULBP1 Antibody clone 30U90. A band is detected at approximately 39 kDa, compared with the predicted molecular weight of 28 kDa. Post-translational glycosylation of ULBP1 may contribute to its higher apparent molecular weight. Samples containing 30 ug of protein per lane were separated by 10% SDS-PAGE, and the primary antibody was used at a dilution of 1:500.

Description

ULBP1 Antibody 30U90 / NKG2D Ligand ULBP1 Antibody recognizes UL16-binding protein 1 (ULBP1), a stress-inducible cell surface glycoprotein involved in immune recognition and surveillance. ULBP1 belongs to the family of NKG2D receptor ligands, which participate in the identification of cells undergoing cellular stress, malignant transformation, or infection. By engaging NKG2D on natural killer cells and certain T lymphocyte populations, ULBP1 contributes to immune responses directed against potentially harmful cells.

Structurally, ULBP1 is related to major histocompatibility complex class I proteins but does not function in conventional antigen presentation. Its extracellular region contains alpha-1 and alpha-2 domains that form the receptor-binding surface. Unlike classical MHC class I molecules, ULBP1 does not require beta-2 microglobulin association or peptide loading. The mature protein is attached to the plasma membrane through a glycosylphosphatidylinositol (GPI) anchor, positioning its extracellular domains for recognition by NKG2D-expressing immune cells.

ULBP1 expression is regulated by cellular stress signaling and can increase following DNA damage, oncogenic activation, and other disturbances of normal cellular homeostasis. Recognition of ULBP1 by NKG2D promotes activating signals that contribute to immune cell cytotoxicity. In natural killer cells, NKG2D associates with the adaptor protein DAP10, which recruits signaling molecules involved in PI3K-dependent activation. This mechanism helps coordinate immune responses against cells displaying stress-associated molecular changes.

ULBP1 also plays an important role in tumor immune surveillance. Increased surface expression can enhance recognition by cytotoxic immune cells, whereas reduced ligand availability may contribute to immune evasion. Tumor-associated changes in ULBP1 transcription, membrane localization, and extracellular release can influence the strength of NKG2D-mediated responses. These regulatory mechanisms are relevant to understanding how malignant cells interact with the immune system.

The protein was originally identified through its interaction with the UL16 glycoprotein of cytomegalovirus. Viral interference with NKG2D ligand trafficking illustrates how pathogens can disrupt immune recognition mechanisms. ULBP1 Antibody 30U90 is relevant to investigations of NKG2D ligand expression, cellular stress signaling, tumor immunology, and the molecular mechanisms governing immune surveillance.

For an additional reagent targeting this NKG2D ligand, see our ULBP1 Polyclonal Antibody, supported by western blot, immunohistochemistry, and flow cytometry testing.

Application Notes

Optimal dilution of the ULBP1 Antibody 30U90 / NKG2D Ligand ULBP1 Antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human ULBP1 was used as the immunogen for the ULBP1 antibody.

Storage

Store the ULBP1 antibody at -20oC.

Alternate Names

UL16-binding protein 1 antibody, NKG2D ligand ULBP1 antibody, RAET1I antibody, Retinoic acid early transcript 1I antibody, ULBP1 recombinant monoclonal antibody

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