# Human ULBP1 Protein, His Tag (MALS verified)

Catalog # UL1-H52H3

## Synonym

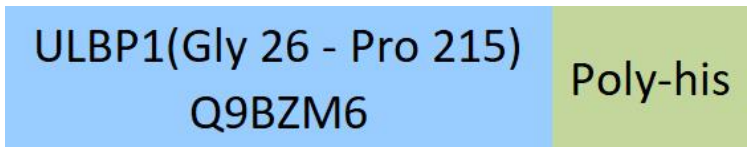
N2DL-1, NKG2DL1, RAET1I

## Source

Human ULBP1 Protein, His Tag (UL1-H52H3) is expressed from human 293 cells (HEK293). It contains AA Gly 26 - Pro 215 (Accession # Q9BZM6).

Predicted N-terminus: Gly 26

## Molecular Characterization




This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 24.2 kDa. The protein migrates as 28-35 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

**For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.**

## Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

**Please avoid repeated freeze-thaw cycles.**

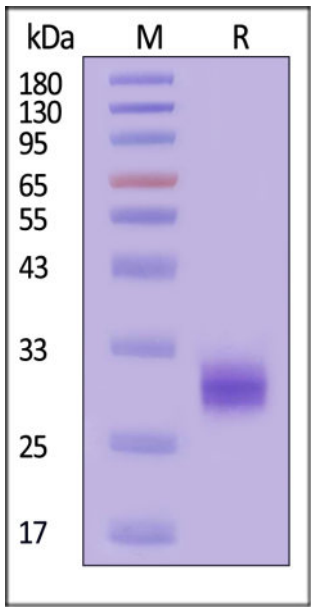
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## ACRO Quality Management System

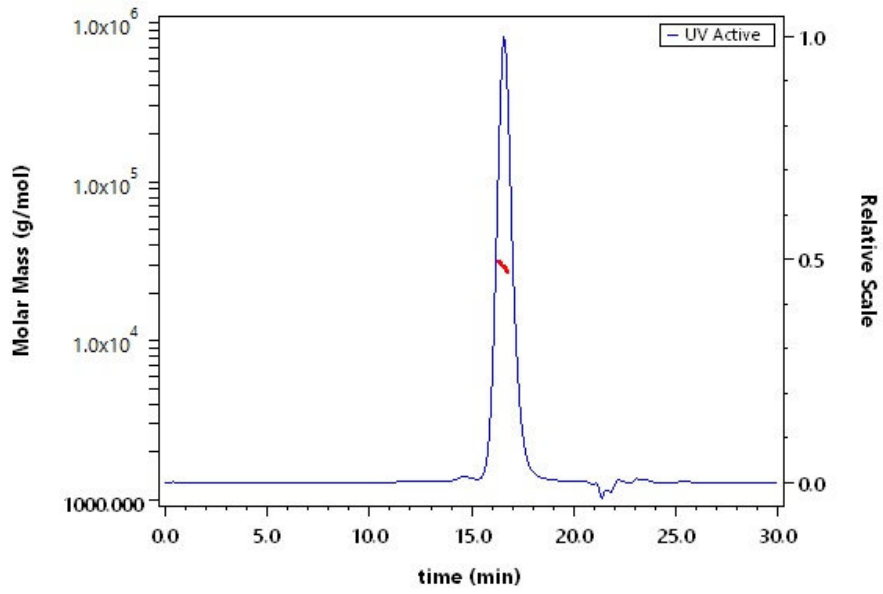
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

## SDS-PAGE



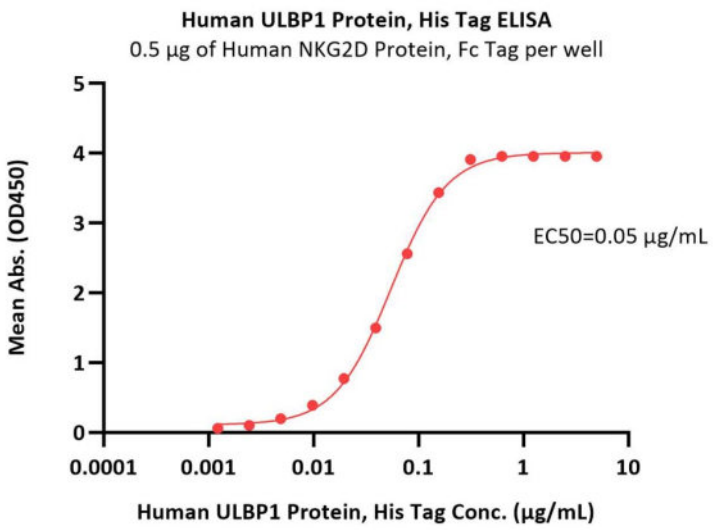

Human ULBP1 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

## SEC-MALS



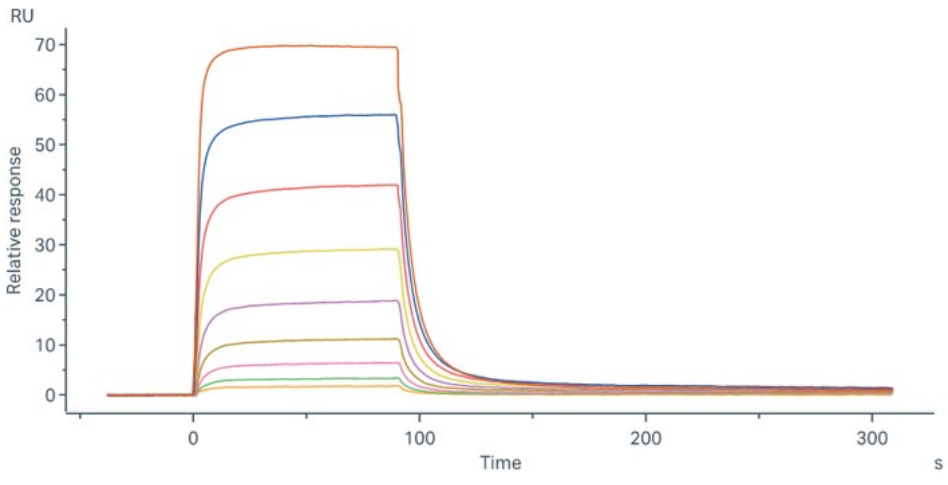

The purity of Human ULBP1 Protein, His Tag (Cat. No. UL1-H52H3) is more than 90% and the molecular weight of this protein is around 25-35 kDa verified by SEC-MALS.

## Bioactivity-ELISA




Immobilized Human NKG2D Protein, Fc Tag (Cat. No. NKD-H5265) at 5 μg/mL (100 μL/well) can bind Human ULBP1 Protein, His Tag (Cat. No. UL1-H52H3) with a linear range of 0.001-0.156 μg/mL μg/mL (QC tested).

## Bioactivity-SPR




Human ULBP1 Protein, His Tag(Cat. No. UL1-H52H3) immobilized on CM5 Chip can bind Human NKG2D Protein, Fc Tag (Cat. No. NKD-H5265) with an affinity constant of 1.31 μM as determined in a SPR assay (Biacore 8K) (Routinely tested).

## Background

ULBP1 is UL16 binding protein 1, also known as NKG2DL1, RAET1I, ALCAN-beta. It is a ligand of natural killer group 2, member D (NKG2D), an immune system-activating receptor on NK cells and T cells. Binding of ULBP1 to NKG2D leads to activation of several signal transduction pathways, including those of

JAK2, STAT5, ERK and PI3K kinase/Akt. In cytomegalovirus-infected cells, ULBP1 binds the UL16 glycoprotein and is prevented from activating the immune system.