

## Anti-Human ULBP1 Antibody [PSH11-95] - BSA and Azide free (Capture)

# HA723406



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	ELISA(Cap)
<b>Clone number:</b>	PSH11-95

**Description:** UL16 binding protein 1 (ULBP1) is a cell surface glycoprotein encoded by ULBP1 gene located on the chromosome 6. ULBP1 is related to MHC class I molecules, but its gene maps outside the MHC locus. The domain structure of ULBP1 differs significantly from those of conventional MHC class I molecules. It does not contain the  $\alpha 3$  domain and the transmembrane segment. ULBP1 is thus composed of only the  $\alpha 1\alpha 2$  domain which is linked to the cell membrane by the GPI anchor. It functions as a stress-induced ligand for NKG2D receptor. ULBP1 is, for example, upregulated during HCMV infection. Binding of HCMV-encoded UL16 glycoprotein to ULBP1 interferes with cell surface localization of ULBP1; this represents another mechanism by which HCMV-infected cells might escape the immune system.

**Immunogen:** Recombinant protein within Human ULBP1 aa 26-216.

**Positive control:** Recombinant Human ULBP1 protein (HA210963).

**Subcellular location:** Cell membrane, Endoplasmic reticulum.

**Database links:** SwissProt: Q9BZM6 Human

**Recommended Dilutions:**

**ELISA(Cap)**

Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH11-96] to Human ULBP1 antibody (Detector) (HA723407) and Rabbit monoclonal [PSH11-97] to Human ULBP1 antibody (Detector) (HA723409) and Recombinant Human ULBP1 protein (HA210963) as the standard. The reference range value is 19.5-2,500 pg/ml.

**Storage Buffer:** 1\*PBS (pH7.4).

**Storage Instruction:** Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

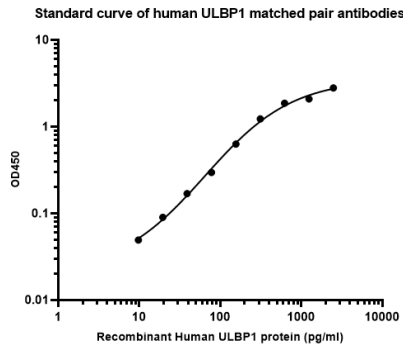
Service mail:support@huabio.cn

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**Fig1:** Sandwich ELISA analysis of human ULBP1 matched pair antibodies

Capture: HA723406, Human ULBP1 Rabbit mAb [PSH11-95]

Detector: HA723407, Human ULBP1 Rabbit mAb [PSH11-96]

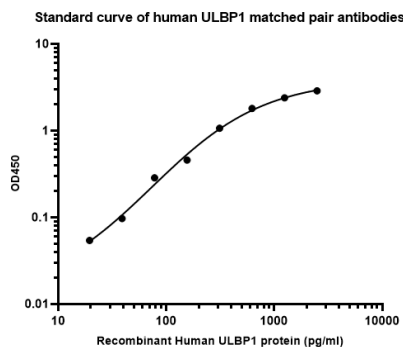


Elisa assay was performed by coating wells of a 96-well plate with 100  $\mu$ l per well of capture antibody (HA723406) diluted in carbonate/bicarbonate buffer, at a concentration of 2 $\mu$ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human ULBP1 protein (HA210963) starting from 2500 pg/ml to 0 pg/ml and detect antibody (HA723407, Biotin, 0.2  $\mu$ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100  $\mu$ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

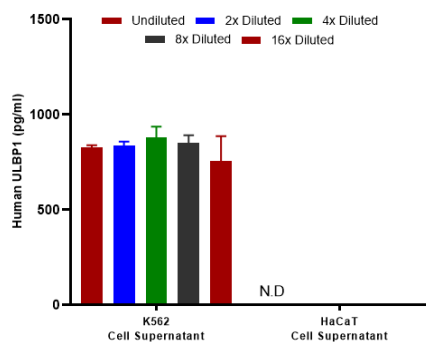
**Fig2:** Sandwich ELISA analysis of human ULBP1 matched pair antibodies

Capture: HA723406, Human ULBP1 Rabbit mAb [PSH11-95]

Detector: HA723409, Human ULBP1 Rabbit mAb [PSH11-97]



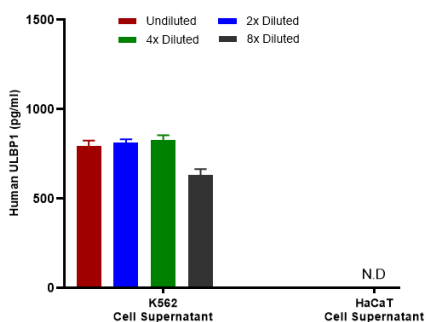
Elisa assay was performed by coating wells of a 96-well plate with 100  $\mu$ l per well of capture antibody (HA723406) diluted in carbonate/bicarbonate buffer, at a concentration of 2 $\mu$ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human ULBP1 protein (HA210963) starting from 2500 pg/ml to 0 pg/ml and detect antibody (HA723409, Biotin, 0.2  $\mu$ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100  $\mu$ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.



**Fig3:** Interpolated concentrations of native ULBP1 in human cell culture supernatant samples.

Capture: HA723406, Human ULBP1 Rabbit mAb [PSH11-95]  
 Detector: HA723407, Human ULBP1 Rabbit mAb [PSH11-96]

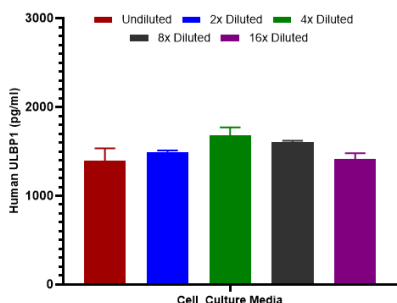
Interpolated concentration of native ULBP1 was measured in duplicate at different sample concentrations. Undiluted samples were 50% cell supernatant. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean ULBP1 concentration was determined to be 831 pg/mL in K562 cell supernatant. There was no detectable signal in HaCaT cell culture supernatant.



**Fig4:** Interpolated concentrations of native ULBP1 in human cell culture supernatant samples.

Capture: HA723406, Human ULBP1 Rabbit mAb [PSH11-95]  
 Detector: HA723409, Human ULBP1 Rabbit mAb [PSH11-97]

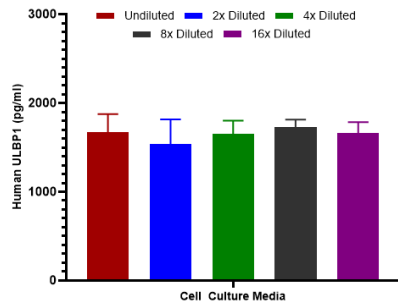
Interpolated concentration of native ULBP1 was measured in duplicate at different sample concentrations. Undiluted samples were 50% cell supernatant. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean ULBP1 concentration was determined to be 767 pg/mL in K562 cell supernatant. There was no detectable signal in HaCaT cell culture supernatant.



**Fig5:** Interpolated concentrations of spiked ULBP1 in cell culture media samples.

Capture: HA723406, Human ULBP1 Rabbit mAb [PSH11-95]  
 Detector: HA723407, Human ULBP1 Rabbit mAb [PSH11-96]

The concentrations of ULBP1 were measured in duplicates, interpolated from the ULBP1 standard curves and corrected for sample dilution. Undiluted samples are as follows: cell culture media 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



**Fig6:** Interpolated concentrations of spiked ULBP1 in cell culture media samples.

Capture: HA723406, Human ULBP1 Rabbit mAb [PSH11-95]  
Detector: HA723409, Human ULBP1 Rabbit mAb [PSH11-97]

The concentrations of ULBP1 were measured in duplicates, interpolated from the ULBP1 standard curves and corrected for sample dilution. Undiluted samples are as follows: cell culture media 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. Ruan GT et al. Immune ULBP1 is Elevated in Colon Adenocarcinoma and Predicts Prognosis. *Front Genet.* 2022 Feb
2. Easom NJW et al. ULBP1 Is Elevated in Human Hepatocellular Carcinoma and Predicts Outcome. *Front Oncol.* 2020 Jun

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