Anti-Human Livin Antibody [PSH12-95] - BSA and Azide free (Detector)

HA723499

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Clone number:	PSH12-95

Description: BIRC7, also known as Livin, is a member of the inhibitor of apoptosis protein (IAP) family. It plays a dual role as an apoptotic regulator, capable of exerting both proapoptotic and anti-apoptotic activities. Livin is crucial for controlling apoptosis, cell proliferation, and cell cycle regulation. Its anti-apoptotic function is primarily mediated through the inhibition of caspases, including CASP3, CASP7, and CASP9, as well as through its E3 ubiquitin-protein ligase activity. Livin promotes cell survival by ubiquitinating and targeting DIABLO/SMAC for degradation, thereby preventing DIABLO/SMAC from disrupting XIAP/BIRC4-caspase interactions. Livin protects cells from apoptosis induced by TNF or chemical agents such as adriamycin, etoposide, and staurosporine. This anti-apoptotic effect is achieved through the activation of MAPK8/JNK1 and possibly MAPK9/JNK2, which depends on TAB1 and MAP3K7/TAK1. In vitro, Livin inhibits CASP3 and the proteolytic activation of pro-CASP9. Structurally, Livin contains a single baculoviral IAP repeat (BIR) domain and a RING domain at the C-terminus. Overexpression of Livin has been observed in various cancers, including lung, colon, and prostate cancers, making it a potential therapeutic target.

Immunogen: Recombinant protein within Human Livin aa 1-232 (HA211325).

Positive control: Recombinant Human Livin protein (HA211325).

Subcellular location: Nucleus, Cytoplasm, Golgi apparatus

Database links: SwissProt: Q96CA5 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH12-94] to Human Livin antibody (Capture) (HA723498) or Rabbit monoclonal [PSH12-96] to Human Livin antibody (Capture) (HA723501) and Recombinant Human Livin protein (HA211325) as the standard. The reference range value is 20.6-5,000 pg/mL.

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

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

Purity: Protein A affinity purified.

Images

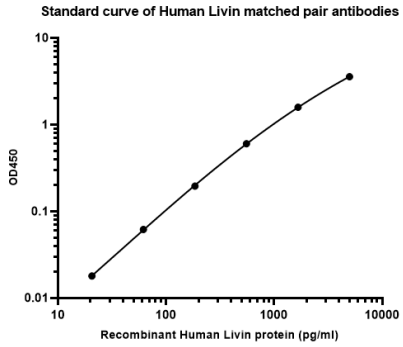

Fig1: Sandwich ELISA analysis of Human Livin matched pair antibodies

Capture: HA723498, Human Livin Rabbit mAb [PSH12-94]
Detector: HA723499, Human Livin Rabbit mAb [PSH12-95]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723498) diluted in carbonate/bicarbonate buffer, at a concentration of 5ug/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human Angiogenin protein (HA211325) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA723499, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ 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.

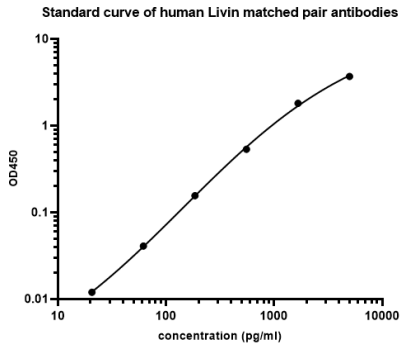

Fig2: Sandwich ELISA analysis of Human Livin matched pair antibodies

Capture: HA723501, Human Livin Rabbit mAb [PSH12-96]
Detector: HA723499, Human Livin Rabbit mAb [PSH12-95]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723501) diluted in carbonate/bicarbonate buffer, at a concentration of 5ug/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human Angiogenin protein (HA211325) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA723499, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ 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.

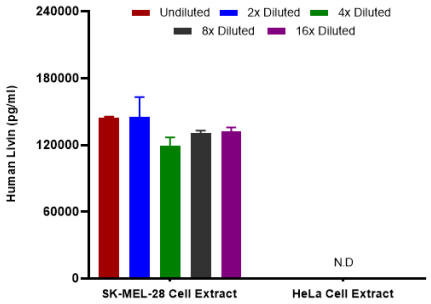

Fig3: Interpolated concentrations of native Livin in SK-MEL-28 and HeLa extract samples based on a 1000 µg/ml extract load.

Capture: HA723498, Human Livin Rabbit mAb [PSH12-94]
Detector: HA723499, Human Livin Rabbit mAb [PSH12-95]

Interpolated concentration of native Livin was measured in duplicate at different sample concentrations and interpolated from the Livin standard curves. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean Livin concentration was determined to be 134,381 pg/mL in SK-MEL-28 cell extract. There was no detectable signal in HeLa cell extract.

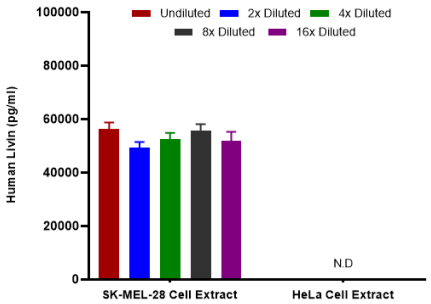

Fig4: Interpolated concentrations of native Livin in SK-MEL-28 and HeLa extract samples based on a 1000 µg/ml extract load.

Capture: HA723501, Human Livin Rabbit mAb [PSH12-96]
Detector: HA723499, Human Livin Rabbit mAb [PSH12-95]

Interpolated concentration of native Livin was measured in duplicate at different sample concentrations and interpolated from the Livin standard curves. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean Livin concentration was determined to be 53,202 pg/mL in SK-MEL-28 cell extract. There was no detectable signal in HeLa cell extract.

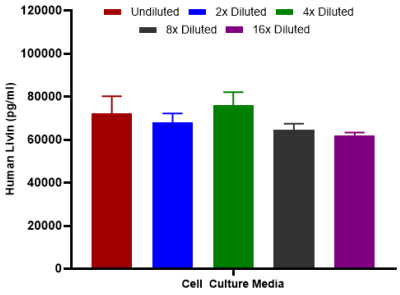

Fig5: Interpolated concentrations of spiked Livin in cell culture media samples.

Capture: HA723498, Human Livin Rabbit mAb [PSH12-94]
Detector: HA723499, Human Livin Rabbit mAb [PSH12-95]

The concentrations of Livin were measured in duplicates, interpolated from the Livin 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).

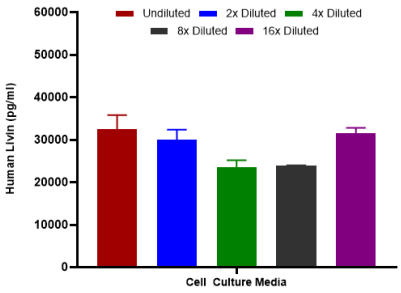

Fig6: Interpolated concentrations of spiked Livin in cell culture media samples.

Capture: HA723501, Human Livin Rabbit mAb [PSH12-96]
Detector: HA723499, Human Livin Rabbit mAb [PSH12-95]

The concentrations of Livin were measured in duplicates, interpolated from the Livin 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).

Background References

1. Kasof GM, Gomes BC. Livin, a novel inhibitor of apoptosis protein family member. J Biol Chem. 2001 Feb.
2. Sanna MG, et al. IAP suppression of apoptosis involves distinct mechanisms: the TAK1/JNK1 signaling cascade and caspase inhibition. Mol Cell Biol. 2002 Mar.