Anti-Human CD48 Antibody [PSH08-37] - BSA and Azide free (Capture/Detector)

HA722978

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap), ELISA(Det)
Clone number:	PSH08-37

Description: This gene encodes a member of the CD2 subfamily of immunoglobulin-like receptors which includes SLAM (signaling lymphocyte activation molecules) proteins. The encoded protein is found on the surface of lymphocytes and other immune cells, dendritic cells and endothelial cells, and participates in activation and differentiation pathways in these cells. The encoded protein does not have a transmembrane domain, however, but is held at the cell surface by a GPI anchor via a C-terminal domain which maybe cleaved to yield a soluble form of the receptor. Multiple transcript variants encoding different isoforms have been found for this gene. Glycosylphosphatidylinositol (GPI)-anchored cell surface glycoprotein that interacts via its N-terminal immunoglobulin domain with cell surface receptors including 2B4/CD244 or CD2 to regulate immune cell function and activation. Participates in T-cell signaling transduction by associating with CD2 and efficiently bringing the Src family protein kinase LCK and LAT to the TCR/CD3 complex. In turn, promotes LCK phosphorylation and subsequent activation. Induces the phosphorylation of the cytoplasmic immunoreceptortyrosine switch motifs (ITSMs) of CD244 initiating a series of signaling events that leads to the generation of the immunological synapse and the directed release of cytolytic granules containing perforin and granzymes by T-lymphocytes and NK-cells.

Immunogen: Recombinant protein within Human CD48 protein aa 27-220 (HA210906).

Positive control: Recombinant Human CD48 protein (HA210906).

Subcellular location: Cell membrane. Secreted.

Database links: SwissProt: P09326 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH08-38] to Human CD48 antibody (Detector) (HA722979) and Recombinant Human CD48 protein (HA210906) as the standard. The reference range value is 5.5-4000 pg/ml.

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH08-36] to Human CD48 antibody (Capture) (HA722977) and recombinant Human CD48 protein (HA210906) as the standard. The reference range value is 5.5-4000 pg/ml.

Storage Buffer: 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

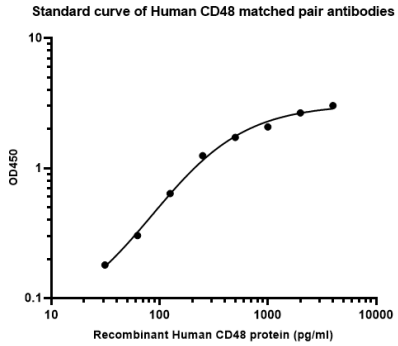

Fig1: Sandwich ELISA analysis of human CD48 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA722977) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/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 CD48 protein (HA210906) starting from 4000 pg/ml to 0 pg/ml and detect antibody (HA722978, 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.

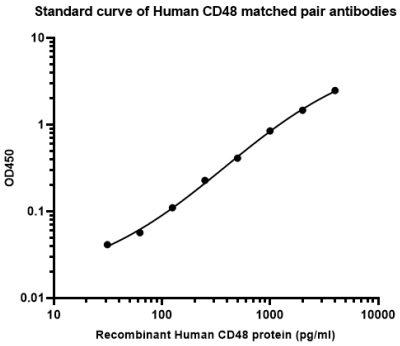

Fig2: Sandwich ELISA analysis of human CD48 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA722978) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/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 CD48 protein (HA210906) starting from 4000 pg/ml to 0 pg/ml and detect antibody (HA722979, 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.

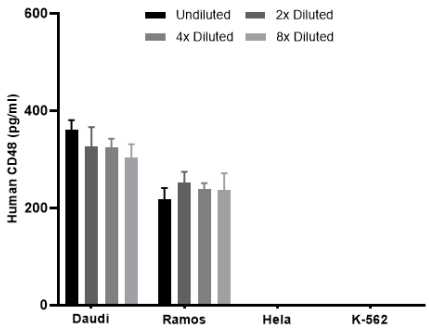

Fig3: Interpolated concentrations of native CD48 in human cell culture supernatant samples.

Interpolated concentration of native CD48 was measured in duplicate at different sample concentrations and interpolated from the CD48 standard curves. Undiluted samples were 100% cell supernatant. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean CD48 concentration was determined to be 329 pg/mL in Daudi and 237 pg/mL in Ramos in cell culture supernatant. There was no detectable signal in Hela and K-562 cell supernatant.

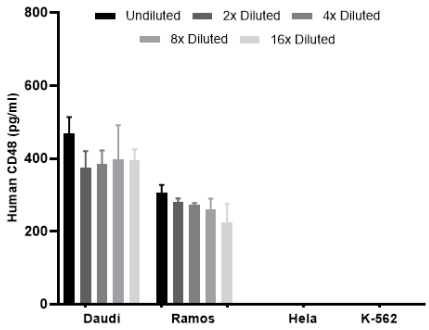

Fig4: Interpolated concentrations of native CD48 in human cell culture supernatant samples.

Interpolated concentration of native CD48 was measured in duplicate at different sample concentrations and interpolated from the CD48 standard curves. Undiluted samples were 100% cell supernatant. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean CD48 concentration was determined to be 405 pg/mL in Daudi and 269 pg/mL in Ramos cell culture supernatant. There was no detectable signal in Hela and K-562 cell supernatant.

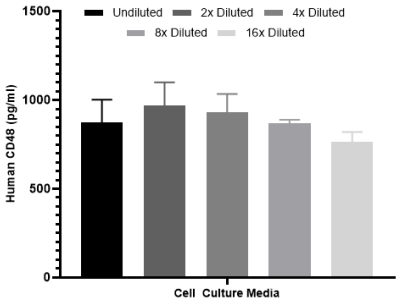

Fig5: Interpolated concentrations of spiked CD48 in cell culture media samples.

The concentrations of CD48 were measured in duplicates, interpolated from the CD48 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).

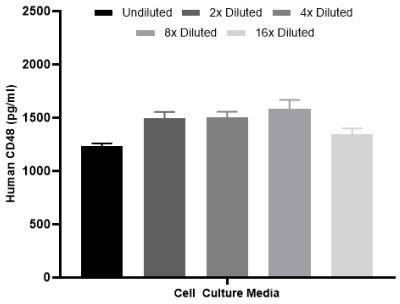

Fig6: Interpolated concentrations of spiked CD48 in cell culture media samples.

The concentrations of CD48 were measured in duplicates, interpolated from the CD48 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. Hawash I.Y., Hu X.E., Adal A., Cassady J.M., Geahlen R.L., Harrison M.L. The oxygen-substituted palmitic acid analogue, 13-oxypalmitic acid, inhibits Lck localization to lipid rafts and T cell signaling. Biochim. Biophys. Acta 1589:140-150 (2002)
2. Claus M., Wingert S., Watzl C. Modulation of natural killer cell functions by interactions between 2B4 and CD48 in cis and in trans. Open Biol. 6:0-0 (2016)