Biotin Conjugated Anti-Human CD47 Antibody [PSH11-06] - Detector

HA723274B

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det), ELISA
Clone number:	PSH11-06

Description:	Adhesive protein that mediates cell-to-cell interactions. Acts as a receptor for thrombospondin THBS1 and as modulator of integrin signaling through the activation of heterotrimeric G proteins. Involved in signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cellular self-renewal, and immunoregulation. Plays a role in modulating pulmonary endothelin EDN1 signaling. Modulates nitrous oxide (NO) signaling, in response to THBS1, hence playing a role as a pressor agent, supporting blood pressure. Plays an important role in memory formation and synaptic plasticity in the hippocampus. Receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells. Interaction with SIRPG mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation. Positively modulates FAS-dependent apoptosis in T-cells, perhaps by enhancing FAS clustering. Plays a role in suppressing angiogenesis and may be involved in metabolic dysregulation during normal aging. In response to THBS1, negatively modulates wound healing. Inhibits stem cell self-renewal, in response to THBS1, probably by regulation of the stem cell transcription factors POU5F1/OCT4, SOX2, MYC/c-Myc and KLF4. May play a role in membrane transport and/or integrin dependent signal transduction. May prevent premature elimination of red blood cells.
Conjugate:	Biotin-conjugated
Immunogen:	Recombinant protein within Human CD47 aa 19-141 (HA211050).
Positive control:	Recombinant Human CD47 protein (HA211050).
Subcellular location:	Cell membrane.
Database links:	SwissProt: Q08722 Human
Recommended Dilutions:	
ELISA(Det)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH11-05] to Human CD47 antibody (Capture) (HA723272) and Recombinant Human CD47 protein (HA211050) as the standard. The reference range value is 39-10.000 pg/ml.
ELISA	Use at an assay dependent concentration.
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% ProClin300.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

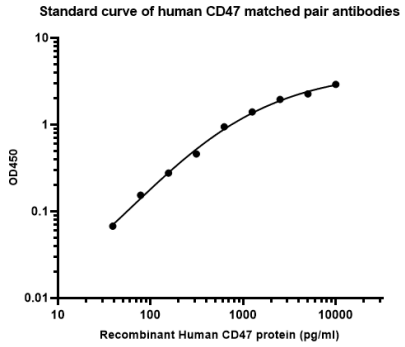

Fig1: Sandwich ELISA analysis of human CD47 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA723272) 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 CD47 protein (HA211050) starting from 10000 pg/ml to 0 pg/ml and detect antibody (HA723273, 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.

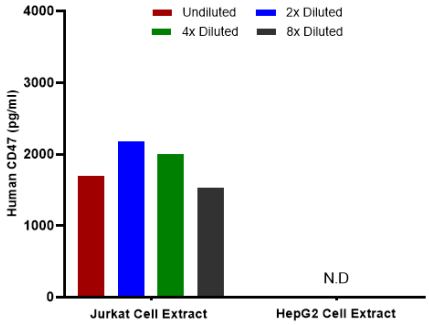

Fig2: Interpolated concentrations of native CD47 in Jurkat and HepG2 extract samples based on a 1000 µg/ml extract load.

Interpolated concentration of native CD47 was measured in duplicate at different sample concentrations and interpolated from the CD47 standard curves. The mean CD47 concentration was determined to be 1,853 pg/mL in Jurkat cell extract, There was no detectable signal in HepG2 cell extract.

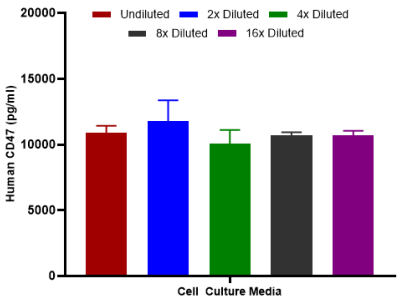

Fig3: Interpolated concentrations of spiked CD47 in cell culture media samples.

The concentrations of CD47 were measured in duplicates, interpolated from the CD47 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. Latour S., Tanaka H., Demeure C., Mateo V., Rubio M., Brown E.J., Maliszewski C., Lindberg F.P., Oldenborg A., Ullrich A., Delespesse G., Sarfati M. Bidirectional negative regulation of human T and dendritic cells by CD47 and its cognate receptor signal-regulator protein-alpha: down-regulation of IL-12 responsiveness and inhibition of dendritic cell activation. J. Immunol. 167:2547-2554 (2001)
2. Rogers N.M., Sharifi-Sanjani M., Yao M., Ghimire K., Bienes-Martinez R., Mutchler S.M., Knupp H.E. TSP1-CD47 signaling is upregulated in clinical pulmonary hypertension and contributes to pulmonary arterial vasculopathy and dysfunction. Cardiovasc. Res. 113:15-29 (2017)