

## Anti-Human CD31 Antibody [PSH07-83] - BSA and Azide free (Detector)

# HA722907



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	ELISA(Det)
<b>Clone number:</b>	PSH07-83

**Description:** Cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions. Tyr-690 plays a critical role in TEM and is required for efficient trafficking of PECAM1 to and from the lateral border recycling compartment (LBRC) and is also essential for the LBRC membrane to be targeted around migrating leukocytes. Trans-homophilic interaction may play a role in endothelial cell-cell adhesion via cell junctions. Homophilic ligation of PECAM1 prevents macrophage-mediated phagocytosis of neighboring viable leukocytes by transmitting a detachment signal. Promotes macrophage-mediated phagocytosis of apoptotic leukocytes by tethering them to the phagocytic cells; PECAM1-mediated detachment signal appears to be disabled in apoptotic leukocytes. Regulates bradykinin- and hyperosmotic shock-induced ERK1/2 activation in endothelial cells.

**Immunogen:** Recombinant protein within Human CD31 aa 28-601 (HA210891).

**Positive control:** Recombinant Human CD31 protein (HA210891).

**Subcellular location:** Cell membrane.

**Database links:** SwissProt: P16284 Human

### Recommended Dilutions:

**ELISA(Det)** Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH07-82] to Human CD31 antibody (Capture) (HA722906) and recombinant Human CD31 protein as the standard (HA210891). The reference range value is 82.3-20,000pg/ml.

**Storage Buffer:** 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.

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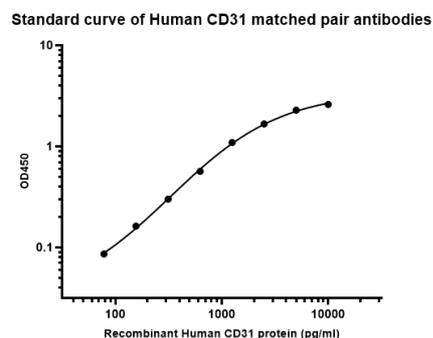
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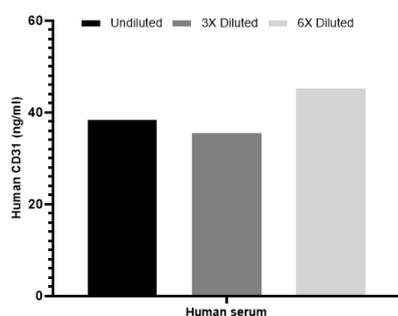
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## Images



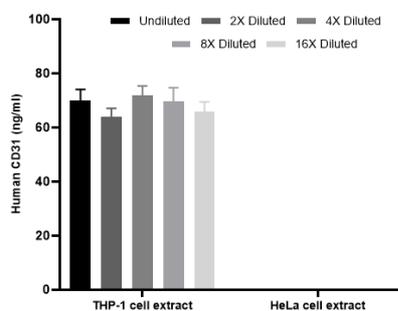
**Fig1:** Sandwich ELISA analysis of Human CD31 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 50  $\mu$ l per well of capture antibody (HA722906) diluted in carbonate/bicarbonate buffer, at a concentration of 2  $\mu$ g/mL overnight at 4°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 CD31 protein (HA210891) starting from 10,000 pg/ml to 0 pg/ml and detect antibody (HA722907, Biotin, 0.1  $\mu$ g/ml) for 1 hour at 30°C with shaking. Then the plate was washed and incubated with 50  $\mu$ l per well of SA-HRP for 0.5 hour at 30°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.



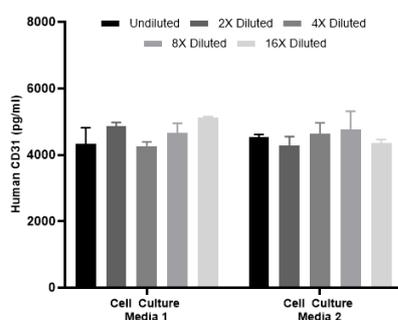
**Fig2:** Interpolated concentrations of native CD31 in human serum samples.

The concentrations of CD31 were interpolated from the CD31 standard curve and corrected for sample dilution. Undiluted samples are human serum 20%. The mean CD31 concentration was determined to be 39.7 ng/mL in human serum.



**Fig3:** Interpolated concentrations of native CD31 in THP-1 and HeLa extract samples based on a 1,000  $\mu$ g/ml extract load.

The concentrations of CD31 were measured in duplicates, interpolated from the CD31 standard curve and corrected for sample dilution. Undiluted samples are THP-1 extract 3% and HeLa extract 100%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean CD31 concentration was determined to be 68.19 ng/ml in THP-1 extract and undetectable in HeLa extract.



**Fig4:** Interpolated concentrations of spiked CD31 in human cell culture media samples.

The concentrations of CD31 were measured in duplicates, interpolated from the CD31 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  $\pm$  SD, n=2).

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

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### Background References

1. Sachs U.J., Andrei-Selmer C.L., Maniar A., Weiss T., Paddock C., Orlova V.V., Choi E.Y., Newman P.J., Preissner K.T., Chavakis T., Santoso S. The neutrophil-specific antigen CD177 is a counter-receptor for platelet endothelial cell adhesion molecule-1 (CD31). *J. Biol. Chem.* 282:23603-23612 (2007)
2. Dasgupta B., Dufour E., Mamdoh Z., Muller W.A. A novel and critical role for tyrosine 663 in platelet endothelial cell adhesion molecule-1 trafficking and transendothelial migration. *J. Immunol.* 182:5041-5051 (2009)

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