Anti-Human NCAM1 Antibody [PSH08-08] - BSA and Azide free (Capture/Detector)

HA722947

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Cynomolgus monkey
Applications:	ELISA(Det), ELISA(Cap)
Clone number:	PSH08-08

Description: Neural cell adhesion molecules (NCAMs) are a family of closely related cell surface glycoproteins involved in cell to cell interactions during growth and thought to play an important role in embryogenesis and development. The expression of these molecules is widespread in all three germ layers during embryogenesis, but is more restrictive in adult tissues. NCAM expression is observed in a variety of human tumors including neuroblastomas, rhabdo-myosarcomas, Wilms' tumor, Ewing's sarcoma and some primitive myeloid malignancies. Multiple isoforms of NCAM have been reported in both mouse and human brain tissue. In humans, NCAMs arise from differential splicing and use of alternative polyadenylation sites of a single gene mapping to 11q23.

Immunogen: Recombinant protein within Human NCAM1 protein aa 20-718 (HA210820).

Positive control: Recombinant Human NCAM1 protein (HA210820).

Subcellular location: Cell membrane.

Database links: SwissProt: P13591 Human

Recommended Dilutions:

ELISA(Det)
ELISA(Cap)

Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH08-07] to Human NCAM1 antibody (Capture) (HA722946) and recombinant Human NCAM1 protein as the standard (HA210820). The reference range value is 74-6,000 pg/mL.

Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH08-09] to Human NCAM1 antibody (Detector) (HA722949) and recombinant Human NCAM1 protein as the standard (HA210820). The reference range value is 74-6,000 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

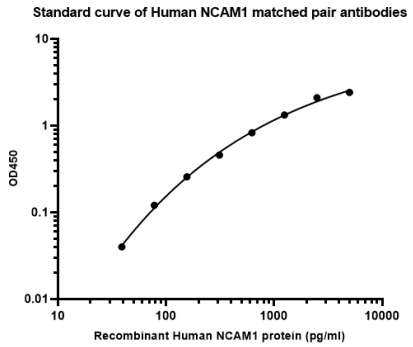

Fig1: Sandwich ELISA analysis of Human NCAM1 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA722946) diluted in carbonate/bicarbonate buffer, at a concentration of 5 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 NCAM1 protein (HA210820) starting from 5000 pg/ml to 0 pg/ml and detect antibody (HA722947, 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.

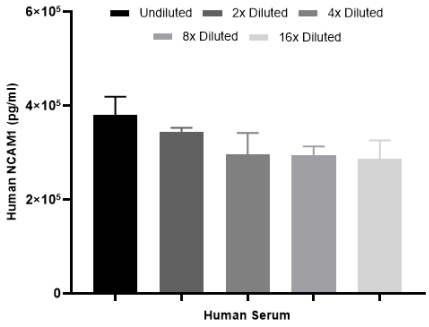

Fig2: Interpolated concentrations of native NCAM1 in human samples.

Interpolated concentration of native NCAM1 was measured in duplicate at different sample concentrations. Undiluted samples were 1% cell supernatant. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean NCAM1 concentration was determined to be 320 ng/mL in human serum.

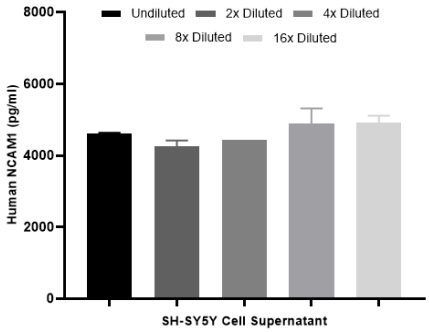

Fig3: Interpolated concentrations of native NCAM1 in human cell culture supernatant samples.

Interpolated concentration of native NCAM1 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 NCAM1 concentration was determined to be 4621 pg/mL in SH-SY5Y cell culture supernatant samples.

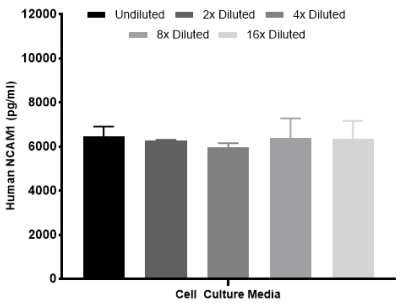

Fig4: Interpolated concentrations of spiked NCAM1 in cell culture media samples.

The concentrations of NCAM1 were measured in duplicates, interpolated from the NCAM1 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).

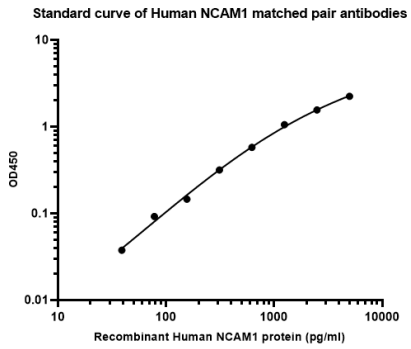

Fig5: Sandwich ELISA analysis of Human NCAM1 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA722947) diluted in carbonate/bicarbonate buffer, at a concentration of 5 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 NCAM1 protein (HA210820) starting from 5000 pg/ml to 0 pg/ml and detect antibody (HA722949, 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.

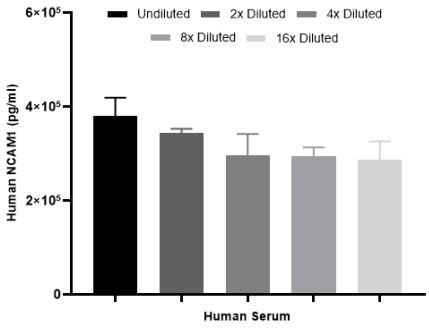

Fig6: Interpolated concentrations of native NCAM1 in human samples.

Interpolated concentration of native NCAM1 was measured in duplicate at different sample concentrations. Undiluted samples were 1% cell supernatant. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean NCAM1 concentration was determined to be 374 ng/mL in human serum.

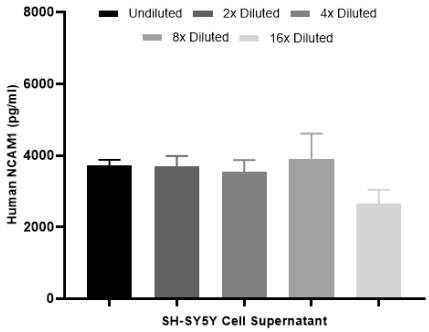

Fig7: Interpolated concentrations of native NCAM1 in human cell culture supernatant samples.

Interpolated concentration of native NCAM1 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 NCAM1 concentration was determined to be 3503 pg/mL in SH-SY5Y cell culture supernatant samples.

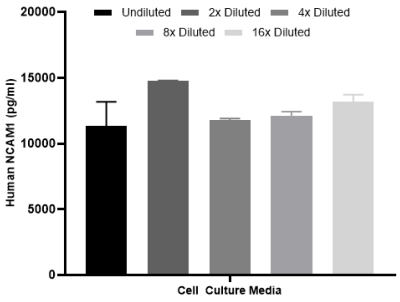

Fig8: Interpolated concentrations of spiked NCAM1 in cell culture media samples.

The concentrations of NCAM1 were measured in duplicates, interpolated from the NCAM1 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. Thoulouze M.I., Lafage M., Schachner M., Hartmann U., Cremer H., Lafon M. The neural cell adhesion molecule is a receptor for rabies virus. J. Virol. 72:7181-7190 (1998)
2. Srivastava M., Zhang Y., Chen J., Sirohi D., Miller A., Zhang Y., Chen Z., Lu H., Xu J., Andy Tao W. Chemical proteomics tracks virus entry and uncovers NCAM1 as Zika virus receptor. Nat. Commun. 11:3896-3896 (2020)