Anti-Human EpCAM Antibody [PSH29-14] - BSA and Azide free (Capture)

HA724842

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH29-14

Description: EPCAM is a carcinoma-associated antigen and belongs to a family which includes at least 2 type I membrane proteins. The EPCAM protein has a role in embryonic stem cells proliferation and differentiation. EPCAM is used as a target for immunotherapy treatment of human carcinomas. EPCAM is expressed on most normal epithelial cells and gastrointestinal carcinomas and acts as a homotypic calcium-independent cell adhesion molecule. Epithelial cell adhesion molecules (EPCAM) can act as a physical homophilic interaction molecule between intestinal epithelial cells (IECs) and intraepithelial lymphocytes (IELs) at the mucosal epithelium for supplying immunological barrier as a first line of defense against mucosal infection. EPCAM gene mutations result in congenital tufting enteropathy.

Immunogen: Recombinant protein within Human EpCAM aa 24-265 (HA211540).

Positive control: Recombinant Human EpCAM protein (HA211540).

Subcellular location: Lateral cell membrane, Cell junction.

Database links: SwissProt: P16422 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH29-15] to Human EpCAM (Detecor) (HA724843) and Recombinant Human EpCAM protein (HA211540) as the standard. The reference range value is 11.7-3,000 pg/mL.

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

Storage Instruction: Store at 2-8℃. Avoid freeze.

Purity: Protein A affinity purified.

Images

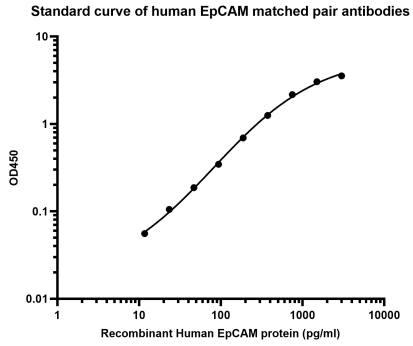


Fig1: Sandwich ELISA analysis of Human EpCAM protein matched pair antibodies

Capture: HA724842, Human EpCAM Rabbit mAb [PSH29-14]
Detector: HA724843, Human EpCAM Rabbit mAb [PSH29-15]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA724842) 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 EpCAM protein (HA211540) starting from 3,000 pg/mL to 0 pg/mL and detect antibody (HA724843, 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.

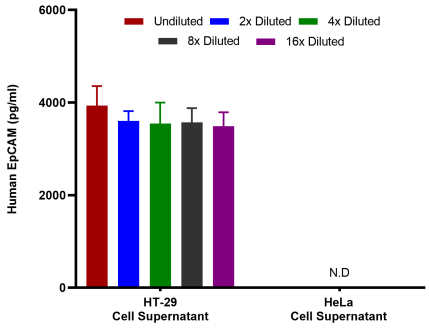


Fig2: Interpolated concentrations of native EpCAM in human cell culture supernatant samples.

Capture: HA724842, Human EpCAM Rabbit mAb [PSH29-14]
Detector: HA724843, Human EpCAM Rabbit mAb [PSH29-15]

Interpolated concentration of native EpCAM 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 EpCAM concentration was determined to be 3,630 pg/mL in HT-29 cell supernatant. There was no detectable signal in HeLa cell culture supernatant.

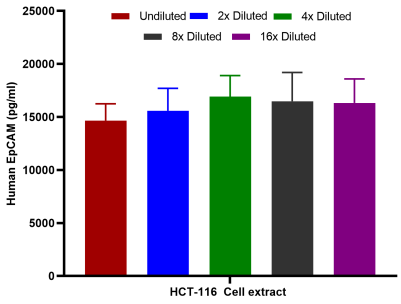


Fig3: Interpolated concentrations of native EpCAM in HCT-116 Cell extract samples based on a 1,000 µg/mL extract load.

Capture: HA724842, Human EpCAM Rabbit mAb [PSH29-14]
Detector: HA724843, Human EpCAM Rabbit mAb [PSH29-15]

Interpolated concentration of native EpCAM was measured in duplicate at different sample concentrations. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean EpCAM concentration was determined to be 15,992 pg/mL in HCT-116 cell extract.

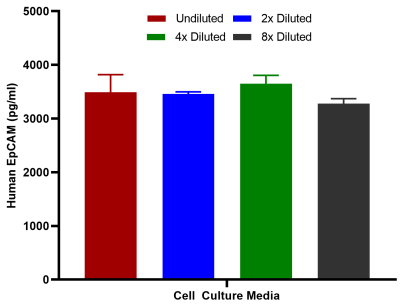


Fig4: Interpolated concentrations of spiked EpCAM in cell culture media samples.

Capture: HA724842, Human EpCAM Rabbit mAb [PSH29-14]
Detector: HA724843, Human EpCAM Rabbit mAb [PSH29-15]

The concentrations of EpCAM were measured in duplicates, interpolated from the EpCAM standard curves and corrected for sample dilution. Diluted samples are as follows: 50% cell culture media with FBS. 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. Li D et al. EpCAM-targeting CAR-T cell immunotherapy is safe and efficacious for epithelial tumors. Sci Adv. 2023 Dec
2. Li F et al. EpCAM-Targeting Aptamer Radiotracer for Tumor-Specific PET Imaging. Bioconjug Chem. 2021 Jun