Anti-CD9 Antibody [PSH0-95]

HA721533

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 25 kDa
Clone number:	PSH0-95

Description: CD9 is a gene encoding a protein that is a member of the transmembrane 4 superfamily also known as the tetraspanin family. It is a cell surface glycoprotein that consists of four transmembrane regions and has two extracellular loops that contain disulfide bonds which are conserved throughout the tetraspanin family. Also containing distinct palmitoylation sites that allows CD9 to interact with lipids and other proteins. Tetraspanin proteins are involved in a multitude of biological processes such as adhesion, motility, membrane fusion, signaling and protein trafficking. Tetraspanins play a role in many biological processes because of their ability to interact with many different proteins including interactions between each other. Their distinct palmitoylation sites allow them to organize on the membrane into tetraspanin-enriched microdomains (TEM). These TEMs are thought to play a role in many cellular processes including exosome biogenesis. CD9 is commonly used as a marker for exosomes as it is contained on their surface.

Immunogen: Synthetic peptide within human CD9 aa 196-228 / 228.

Positive control: HeLa cell lysate, MCF7 cell lysate, HepG2 cell lysate, SW480 cell lysate, BT-20 cell lysate, human colon carcinoma tissue, human lung carcinoma tissue.

Subcellular location: Cell membrane, Membrane, Secreted, extracellular exosome.

Database links: SwissProt: P21926 Human

Recommended Dilutions:

WB	1:2,000-1:5,000
IHC-P	1:200-1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

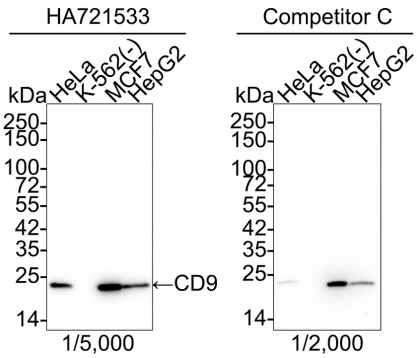

Fig1: Western blot analysis of CD9 on different lysates with Rabbit anti-CD9 antibody (HA721533) at 1/5,000 dilution and competitor's antibody at 1/2,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: K-562 cell lysate (negative)
Lane 3: MCF7 cell lysate
Lane 4: HepG2 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 25 kDa
Observed band size: 20 kDa

Exposure time: Lane 1-4 (left): 53 seconds; Lane 1-4 (right): 3 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721533) at 1/5,000 dilution and competitor's antibody at 1/2,000 dilution were used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

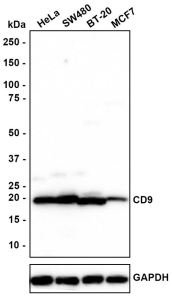

Fig2: Western blot analysis of CD9 on different lysates with Rabbit anti-CD9 antibody (HA721533) at 1/1,000 dilution.

Lane 1: HeLa cell lysate (10 µg/Lane)
Lane 2: SW480 cell lysate (10 µg/Lane)
Lane 3: BT-20 cell lysate (10 µg/Lane)
Lane 4: MCF7 cell lysate (10 µg/Lane)

Predicted band size: 25 kDa
Observed band size: 20 kDa

Exposure time: 42 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721533) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

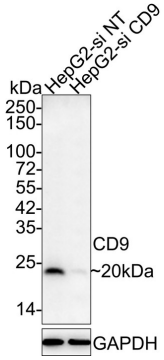

Fig3: Western blot analysis of CD9 on different lysates with Rabbit anti-CD9 antibody (HA721533) at 1/2,000 dilution.

Lane 1: HepG2-si NT cell lysate
Lane 2: HepG2-si CD9 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 25 kDa
Observed band size: 20 kDa

Exposure time: 1 minute 55 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721533) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

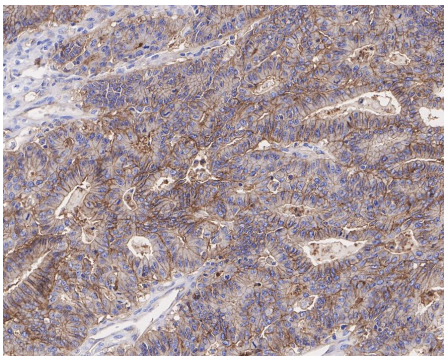

Fig4: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue with Rabbit anti-CD9 antibody (HA721533) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721533) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

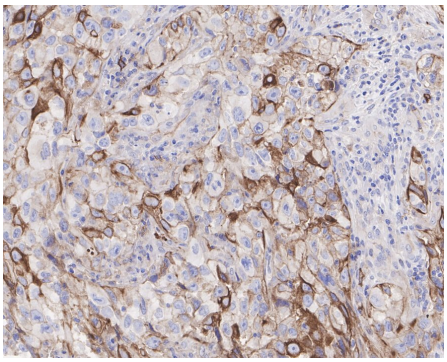

Fig5: Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue with Rabbit anti-CD9 antibody (HA721533) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721533) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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

Background References

1. Mathieu M et al. Specificities of exosome versus small ectosome secretion revealed by live intracellular tracking of CD63 and CD9. Nat Commun. 2021 Jul
2. Cho JH et al. CD9 induces cellular senescence and aggravates atherosclerotic plaque formation. Cell Death Differ. 2020 Sep