Anti-Langerin / CD207 Antibody [PSH04-60]

HA722159

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IF-Cell, IF-Tissue
Molecular Wt:	Predicted band size: 37 kDa
Clone number:	PSH04-60

Description: Langerin (CD207) is a type II transmembrane protein which is encoded by the CD207 gene in humans. It was discovered by scientists Sem Saeland and Jenny Valladeau as a main part of Birbeck granules. Langerin is C-type lectin receptor on Langerhans cells (LCs) and in mice also on dermal interstitial CD103+ dendritic cells (DC) and on resident CD8+ DC in lymph nodes. Langerin has similar function and structure as a DCs surface protein DC-SIGN (CD209). Both receptors bind similar antigens via the CRD, for instance Mycobacterium tuberculosis and HIV-1. However, whereas HIV-1 binding to langerin leads to the elimination of the virus, HIV-1 binding to DC-SIGN leads to infection of the cell.

Immunogen: Synthetic peptide within human Langerin aa 1-43 / 328.

Positive control: Human lymph nodes tissue, human skin tissue, human tonsil tissue, 293T cells transfected with CD207/Langerin.

Subcellular location: Membrane.

Database links: SwissProt: Q9UJ71 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:4,000
IF-Cell	1:2,500
IF-Tissue	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). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

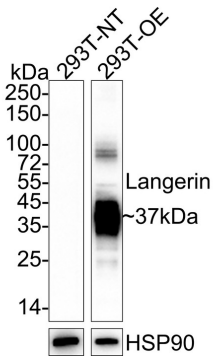

Fig1: Western blot analysis of Langerin / CD207 on different lysates with Rabbit anti-Langerin / CD207 antibody (HA722159) at 1/1,000 dilution.

Lane 1: 293T-NT cell lysate
Lane 2: 293T-OE-CD207/Langerin cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 37 kDa
Observed band size: 37 kDa

Exposure time: 20 seconds; ECL: K1801;
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 (HA722159) at 1/1,000 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.

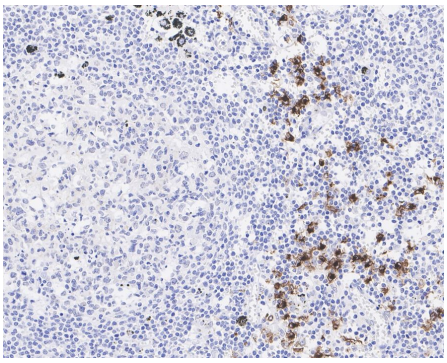

Fig2: Immunohistochemical analysis of paraffin-embedded human lymph nodes tissue with Rabbit anti-Langerin / CD207 antibody (HA722159) at 1/4,000 dilution.

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 (HA722159) at 1/4,000 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.

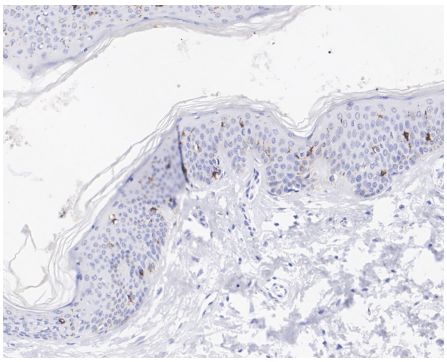

Fig3: Immunohistochemical analysis of paraffin-embedded human skin tissue with Rabbit anti-Langerin / CD207 antibody (HA722159) at 1/4,000 dilution.

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 (HA722159) at 1/4,000 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.

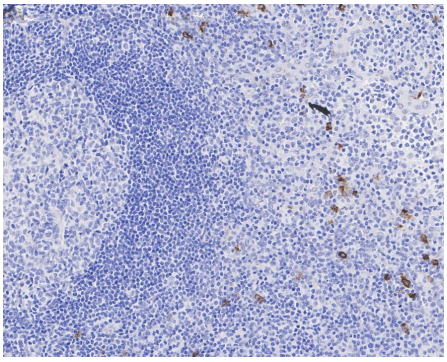

Fig4: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-Langerin / CD207 antibody (HA722159) at 1/4,000 dilution.

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 (HA722159) at 1/4,000 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.

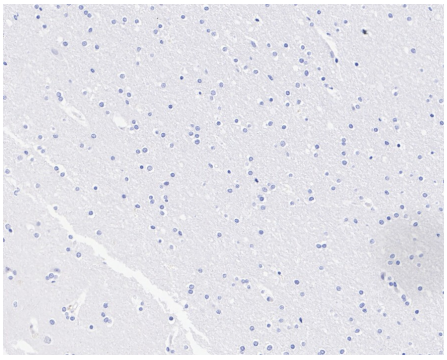

Fig5: Immunohistochemical analysis of paraffin-embedded human brain tissue (negative) with Rabbit anti-Langerin / CD207 antibody (HA722159) at 1/2,000 dilution.

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 (HA722159) at 1/2,000 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.

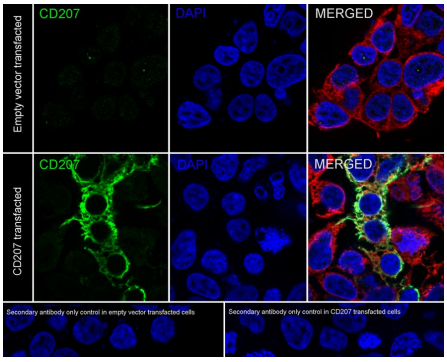

Fig6: Immunocytochemistry analysis of 293T cells transfected with or without CD207/Langerin labeling Langerin / CD207 with Rabbit anti-Langerin / CD207 antibody (HA722159) at 1/2,500 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Langerin / CD207 antibody (HA722159) at 1/2,500 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Background References

1. Maarifi G et al. Langerin (CD207) represents a novel interferon-stimulated gene in Langerhans cells. Cell Mol Immunol. 2020 May
2. Alimohammadi S et al. TRPV4 Activation Increases the Expression of CD207 (Langerin) of Monocyte-Derived Langerhans Cells without Affecting their Maturation. J Invest Dermatol. 2023 May