Anti-CD161 Antibody [A8E1]

HA601063

Product Type:	Mouse monoclonal IgG2b, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 25 kDa
Clone number:	A8E1

Description: Killer cell lectin-like receptor subfamily B, member 1, also known as KLRB1, NKR-P1A or CD161 (cluster of differentiation 161), is a human gene. Natural killer (NK) cells are lymphocytes that mediate cytotoxicity and secrete cytokines after immune stimulation. Several genes of the C-type lectin superfamily, including the rodent NKRP1 family of glycoproteins, are expressed by NK cells and may be involved in the regulation of NK cell function. The KLRB1 protein contains an extracellular domain with several motifs characteristic of C-type lectins, a transmembrane domain, and a cytoplasmic domain. The KLRB1 protein, NKR-P1A or CD161, is classified as a type II membrane protein because it has an external C terminus. NKR-P1A, the receptor encoded by the KLRB1 gene, recognizes Lectin Like Transcript-1 (LLT1) as a functional ligand. Expressed in a subset of NK cells predominantly in intestinal epithelium and liver. Detected in peripheral blood T-cells and preferentially in adult T-cells with a memory antigenic phenotype.

Immunogen: Synthetic peptide within human CD161 aa 176-225.

Positive control: THP-1 cell lysate, HL-60 cell lysate, K-562 cell lysate, Jurkat cell lysate, human kidney tissue lysate, human kidney tissue, THP-1.

Subcellular location: Membrane

Database links: SwissProt: Q12918 Human

Recommended Dilutions:

WB	1:2,000
IHC-P	1:500
FC	1:500-1:1,000

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

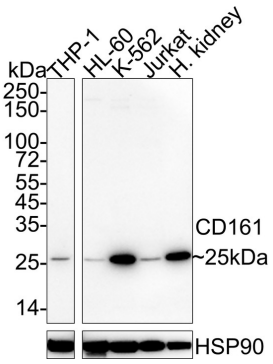

Fig1: Western blot analysis of CD161 on different lysates with Mouse anti-CD161 antibody (HA601063) at 1/2,000 dilution.

Lane 1: THP-1 cell lysate (20 µg/Lane)
Lane 2: HL-60 cell lysate (20 µg/Lane)
Lane 3: K-562 cell lysate (20 µg/Lane)
Lane 4: Jurkat cell lysate (20 µg/Lane)
Lane 5: Human kidney tissue lysate (40 µg/Lane)

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

Exposure time: 3 minutes; 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 (HA601063) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Anti-Mouse IgG for IP Nano-secondary antibody (NBI02H) at 1/5,000 dilution was used for 1 hour at room temperature.

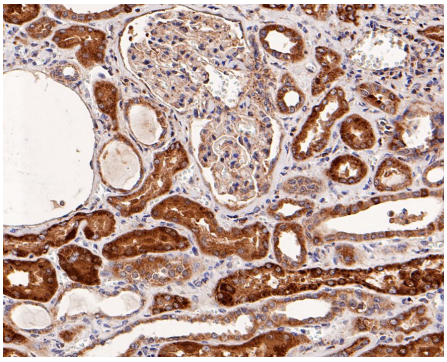

Fig2: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-CD161 antibody (HA601063) at 1/500 dilution.

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 (HA601063) at 1/500 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.

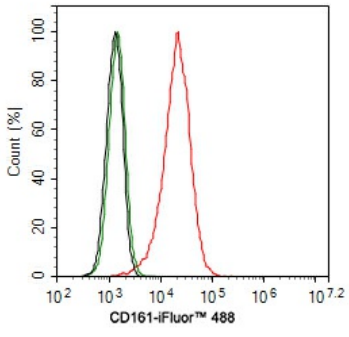

Fig3: Flow cytometric analysis of THP-1 cells labeling CD161.

Cells were washed twice with cold PBS and resuspend. Then stained with the primary antibody (HA601063, 1ug/ml) (red) compared with Mouse IgG1 Isotype Control (green). After incubation of the primary antibody at +4℃ for 30 minutes, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Mouse IgG Secondary antibody (HA1125) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Christiansen D., Mouhtouris E., Milland J., Zingoni A., Santoni A., Sandrin M.S. Recognition of a carbohydrate xenoepitope by human NKRP1A (CD161). Xenotransplantation 13:440-446(2006).
2. Pozo D., Vales-Gomez M., Mavaddat N., Williamson S.C., Chisholm S.E., Reyburn H. CD161 (human NKR-P1A) signaling in NK cells involves the activation of acid sphingomyelinase. J. Immunol. 176:2397-2406(2006).