Anti-CD180 Antibody

ER2001-06

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 74 kDa.

Description: CD180 antigen is a protein that in humans is encoded by the CD180 gene. CD180 is a cell surface molecule consisting of extracellular leucine-rich repeats (LRR) and a short cytoplasmic tail. It is also known by the archaic terms Bgp-95 and RP105, for the founding designations following discovery in humans (1988) and mice (1994), respectively. CD180 is expressed on antigen presenting cells including B cells and dendritic cells. The extracellular LRR is associated with a molecule called MD-1 and form the cell surface receptor complex, CD180/MD-1. It belongs to the family of pathogen receptors, Toll-like receptors (TLR). CD180/MD-1, by working in concert with TLR4, controls B cell recognition and signaling of lipopolysaccharide (LPS), a membrane constituent of Gram-negative bacteria. Recently, CD180 has been demonstrated to be involved in the survival and prognosis of B-cell chronic lymphocytic leukemia.

Immunogen: Recombinant protein within human CD180 aa 370-580.

Positive control: Daudi cell lysate, rat spleen tissue lysate, mouse spleen tissue lysate, rat spleen tissue, human spleen tissue, mouse spleen tissue, Daudi.

Subcellular location: Cell membrane.

Database links: SwissProt: Q99467 Human | Q62192 Mouse

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

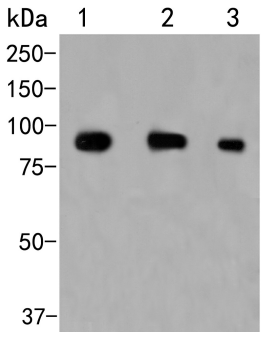

Fig1: Western blot analysis of CD180 on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ER2001-06, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.
Positive control:
Lane 1: Daudi cell lysate
Lane 2: Rat spleen tissue lysate
Lane 3: Mouse spleen tissue lysate

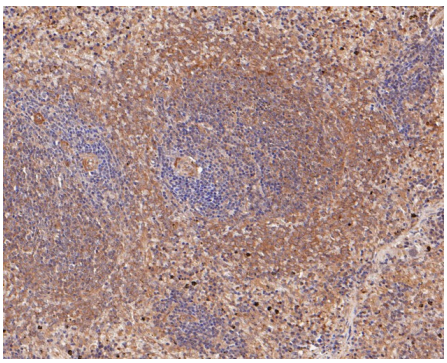

Fig2: Immunohistochemical analysis of paraffin-embedded rat spleen tissue using anti-CD180 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER2001-06, 1/50) for 30 minutes 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.

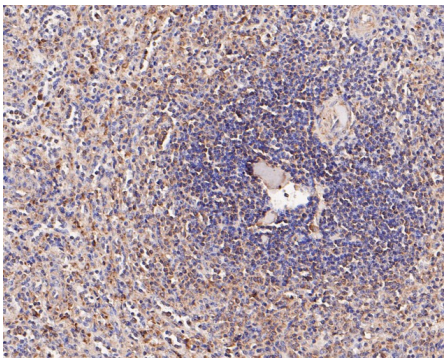

Fig3: Immunohistochemical analysis of paraffin-embedded human spleen tissue using anti-CD180 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER2001-06, 1/200) for 30 minutes 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.

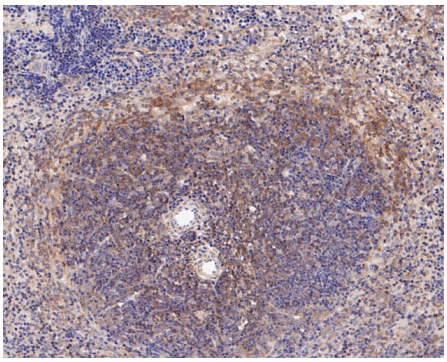

Fig4: Immunohistochemical analysis of paraffin-embedded mouse spleen tissue using anti-CD180 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER2001-06, 1/200) for 30 minutes 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.

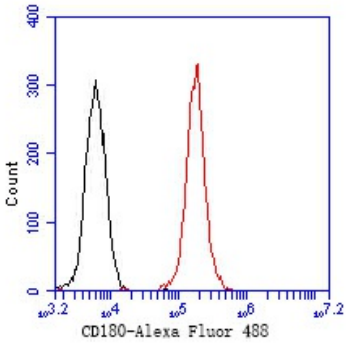

Fig5: Flow cytometric analysis of CD180 was done on Daudi cells. The cells were fixed, permeabilized and stained with the primary antibody (ER2001-06, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

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

Background References

1. Yang Y. et. al. CD180 Ligation Inhibits TLR7- and TLR9-Mediated Activation of Macrophages and Dendritic Cells Through the Lyn-SHP-1/2 Axis in Murine Lupus. Front Immunol. 2018 Nov
2. Kikuchi J. et. al. Myeloma Cells Are Activated in Bone Marrow Microenvironment by the CD180/MD-1 Complex, Which Senses Lipopolysaccharide. Cancer Res. 2018 Apr