

Anti-CD45 Antibody

ER1901-29



| | |
|----------------------------|---|
| Product Type: | Rabbit polyclonal IgG, primary antibodies |
| Species reactivity: | Human |
| Applications: | WB, IHC-P, FC |
| Molecular Wt: | Predicted band size: 147 kDa |

Description: Protein tyrosine phosphatase, receptor type, C also known as PTPRC is an enzyme that, in humans, is encoded by the PTPRC gene. PTPRC is also known as CD45 antigen (CD stands for cluster of differentiation), which was originally called leukocyte common antigen (LCA). The protein product of this gene, best known as CD45, is a member of the protein tyrosine phosphatase (PTP) family. PTPs are signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. CD45 contains an extracellular domain, a single transmembrane segment, and two tandem intracytoplasmic catalytic domains, and thus belongs to the receptor type PTP family. CD45 is a type I transmembrane protein that is present in various isoforms on all differentiated hematopoietic cells (except erythrocytes and plasma cells). CD45 has been shown to be an essential regulator of T- and B-cell antigen receptor signaling. It functions through either direct interaction with components of the antigen receptor complexes via its extracellular domain (a form of co-stimulation), or by activating various Src family kinases required for the antigen receptor signaling via its cytoplasmic domain. CD45 also suppresses JAK kinases, and so functions as a negative regulator of cytokine receptor signaling.

Immunogen: Synthetic peptide within C-terminal human CD45.

Positive control: Jurkat cell lysates, human tonsil tissue, human spleen tissue, Jurkat.

Subcellular location: Cell membrane, Membrane raft.

Database links: SwissProt: P08575 Human

Recommended Dilutions:

| | |
|-------------------|---------------|
| WB | 1:500-1:2,000 |
| ICC/ IHC-P | 1:50-1:500 |
| FC | 1:50-1:100 |

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

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

Purity: Immunogen affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物
HUABIO
www.huabio.cn

Images

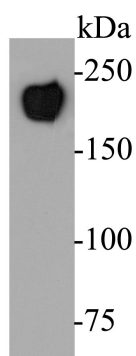


Fig1: Western blot analysis of CD45 on Jurkat cell lysate. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ER1901-29, 1/1000) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.

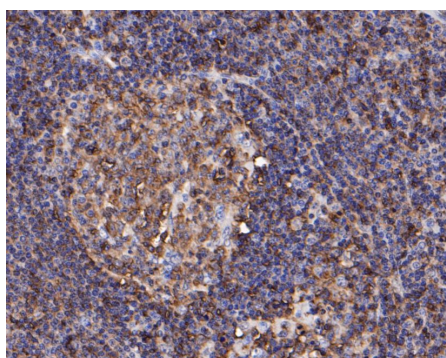


Fig2: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-CD45 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (ER1901-29, 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.

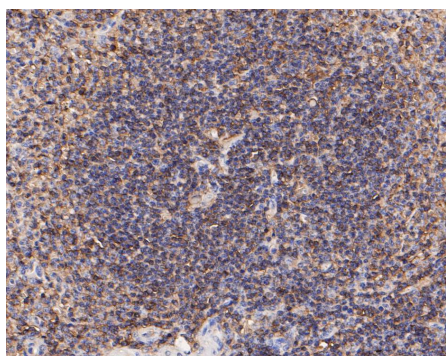


Fig3: Immunohistochemical analysis of paraffin-embedded human spleen tissue using anti-CD45 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (ER1901-29, 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.

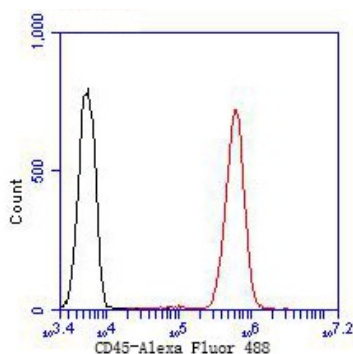


Fig4: Flow cytometric analysis of CD45 was done on Jurkat cells. The cells were fixed, permeabilized and stained with the primary antibody (ER1901-29, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物
HUABIO
www.huabio.cn

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

Background References

1. Wu L. et. al. SKAP55 coupled with CD45 positively regulates T-cell receptor-mediated gene transcription. *Mol. Cell. Biol.* 22:2673-2686(2002).
2. Gabaev I. et. al. The human cytomegalovirus UL11 protein interacts with the receptor tyrosine phosphatase CD45, resulting in functional paralysis of T cells. *PLoS Pathog.* 7:E1002432-E1002432(2011).

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

 华安生物
HUAABIO
www.huabio.cn