Anti-CD45 Antibody [JE03-05]

IRS025



Product Type: Recombinant Rabbit monoclonal IgG, primary antibodies

Species reactivity: Human
Applications: mIHC

Molecular Wt: Predicted band size: 147 kDa.

Clone number: JE03-05

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: Recombinant protein within Human CD45 aa 1,210-1,306 / 1,306.

Positive control: Human tonsils tissue.

Subcellular location: Cell junction, Cell membrane, Membrane

Database links: SwissProt: P08575 Human

Recommended Dilutions:

mIHC 1:100

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

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw

cycles.

Purity: Protein A affinity purified.

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Images

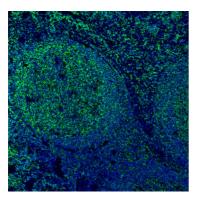


Fig1: mIHC analysis of human tonsils tissue (Formalin/PFA-fixed paraffin-embedded sections) with Rabbit anti-CD45 antibody (IRS025) at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at $95\,^{\circ}\mathrm{C}$. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

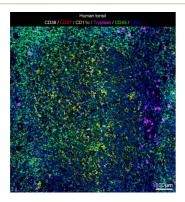


Fig2: mIHC analysis of human tonsil tissue (Formalin/PFA-fixed paraffin-embedded sections) with CD38 (IRS006), CD57 (IRS027), CD11c (IRS001), Tryptase (IRS041) and CD45 (IRS025) antibody at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95 $^{\circ}$ C. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

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

Background References

1. 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).