bs-10602R **[Primary Antibody]**

CD45 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 19264 **SWISS:** P06800

Target: CD45

Immunogen: KLH conjugated synthetic peptide derived from mouse CD45: 131-230/1273. < Extracellular >

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains, and thus belongs to receptor type PTP. This gene is specifically expressed in hematopoietic cells. This PTP 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, or by activating various Src family kinases required for the antigen receptor signaling. This PTP also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling
CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase (PTP) ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. CD45 is absent on non-hematopoietic cell lines, normal and malignant, non-hematopoietic tissues. CD45 glycoprotein is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases. CD45 protein exists as multiple isoforms as a result of alternative splicing, differ in their extracellular domains but share identical transmembrane and cytoplasmic domains. CD45RA is an isoform of the CD45 complex and has restricted expression between different subtypes of lymphoid cells. CD45 isoforms differ in their ability to translocate into the glycosphingolipid-enriched membrane domains and their expression depends on cell type and physiological state of the cell. CD45 has been shown to be an essential regulator of T- and B-cell antigen receptor signaling and suppresses JAK kinases to regulate cytokine receptor signaling. CD45 is also important in promoting cell survival by modulating integrin-mediated signal transduction pathway, DNA fragmentation during apoptosis and inhibition or upregulation of various immunological functions.

Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)

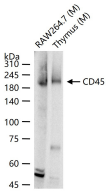
Reactivity: Mouse

Predicted MW.: 143 kDa

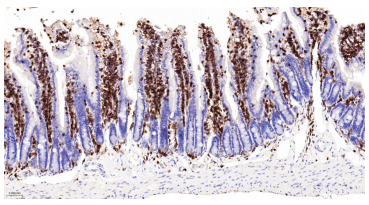
Observed MW.: 220 kDa

Subcellular Location: Cell membrane

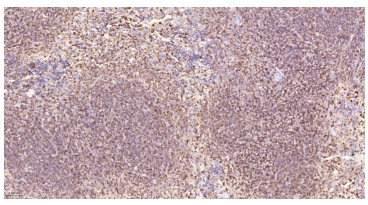
VALIDATION IMAGES



25 ug total protein per lane of various lysates (see on figure) probed with CD45 polyclonal



Paraformaldehyde-fixed, paraffin embedded Mouse Small Intestine; Antigen retrieval by



Paraformaldehyde-fixed, paraffin embedded Mouse Spleen; Antigen retrieval by boiling in

antibody, unconjugated (bs-10602R) at 1:500 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.

boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with CD45 Polyclonal Antibody, Unconjugated(bs-10602R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.

sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with CD45 Polyclonal Antibody, Unconjugated(bs-10602R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.

SELECTED CITATIONS

- **[IF=8.2]** Zhiming Shen. et al. Construction of a novel cell-free tracheal scaffold promoting vascularization for repairing tracheal defects. MATER TODAY BIO. 2023 Dec;23:100841 IF ;Rabbit. 37920292
- **[IF=3.6]** Cheng-Wei Yang. et al. Aligned nanofiber scaffolds combined with cyclic stretch facilitate mesenchymal stem cell differentiation for ligament engineering. WORLD J STEM CELLS. 2025 Aug;17(8):107124 FC ;Rabbit. 40951703