

Biotin Anti-CD45 antibody [MEM-28] α b28107

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Overview

Product name	Biotin Anti-CD45 antibody [MEM-28]
Description	Biotin Mouse monoclonal [MEM-28] to CD45
Host species	Mouse
Conjugation	Biotin
Specificity	Ab28107 reacts with all alternative forms of CD45 antigen expressed at high level on all cells of hematopoietic origin, except erythrocytes and platelets.
Tested applications	Suitable for: Flow Cyt
Species reactivity	Reacts with: Human
Immunogen	Tissue, cells or virus corresponding to Human CD45. Human thymocytes and T lymphocytes
Positive control	Flow Cyt: Human peripheral blood cells.
General notes	<p>The antibody is conjugated with Biotin LC NHS under optimum conditions. The reagent is free of unconjugated biotin.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.097% Sodium azide
Purity	Size exclusion
Purification notes	Purity >95% by SDS-PAGE.
Clonality	Monoclonal

Clone number	MEM-28
Isotype	IgG1
Light chain type	kappa

Applications

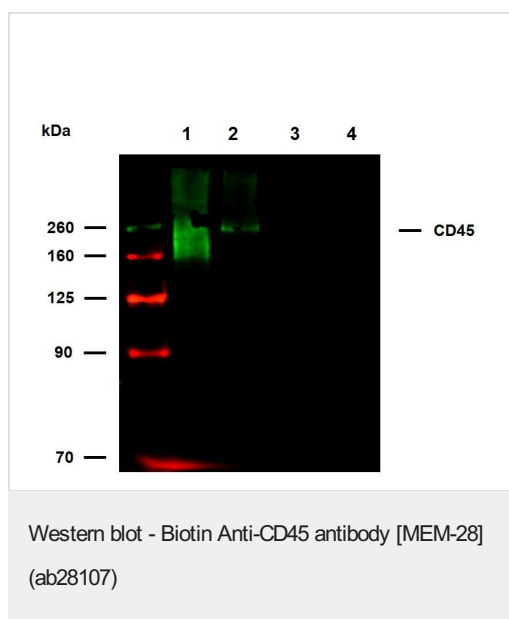
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab28107 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		1/500. ab18434 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

Function	Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor. Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN.
Involvement in disease	Defects in PTPRC are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (T(-)B(+)NK(+)) SCID [MIM:608971]. A form of severe combined immunodeficiency (SCID), a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients present in infancy recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development. Genetic variations in PTPRC are involved in multiple sclerosis susceptibility (MS) [MIM:126200]. MS is a neurodegenerative disorder characterized by the gradual accumulation of focal plaques of demyelination particularly in the periventricular areas of the brain. Peripheral nerves are not affected. Onset usually in third or fourth decade with intermittent progression over an extended period. The cause is still uncertain.
Sequence similarities	Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily. Contains 2 fibronectin type-III domains. Contains 2 tyrosine-protein phosphatase domains.
Domain	The first PTPase domain interacts with SKAP1.
Post-translational modifications	Heavily N- and O-glycosylated.
Cellular localization	Membrane. Membrane raft. Colocalized with DPP4 in membrane rafts.

Images



All lanes : Biotin Anti-CD45 antibody [MEM-28] (ab28107) at 1 $\mu\text{g/ml}$

Lanes 1 & 4 : Jurkat whole cell extract with non-reducing SDS-loading buffer

Lane 2 : Raji whole cell extract with non-reducing SDS-loading buffer

Lane 3 : HeLa whole cell extract with non-reducing SDS-loading buffer

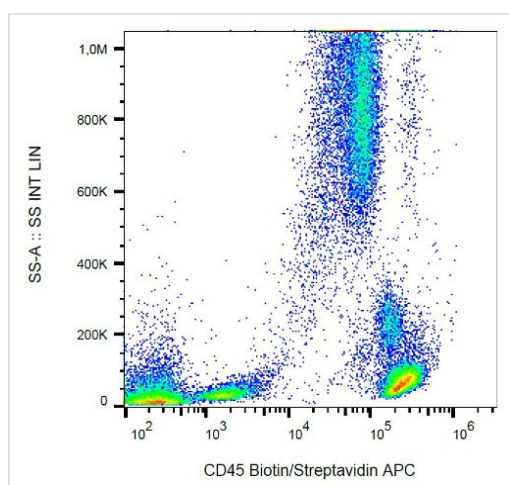
Secondary

All lanes : IRDye 800CW Streptavidin

Western blotting analysis was performed on whole cell extracts (RIPA lysis buffer) of Jurkat, Raji, HeLa, and HEK293T cell lines, mixed and heated (100°C , 5 min) with non-reducing SDS-loading buffer. Samples were resolved using 7% Tris-glycine SDS gel electrophoresis.

Nitrocellulose membrane blot was probed with ab28107 (1 $\mu\text{g/ml}$), followed by IRDye 800CW Streptavidin (green). Multiplex fluorescent Western blot detection was performed.

CD45 molecules were detected at ~180-250 kDa in Jurkat and Raji cell lines



Flow Cytometry analysis of Human peripheral blood cells labeling CD45 with Anti-CD45 antibody [MEM-28] (Biotin) (ab28107).

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