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Monoclonal Antibody to CD45 / LCA - Purified

Alternate names: L-CA, Leukocyte common antigen, PTPRC, Receptor-type tyrosine-protein phosphatase C, T200

Catalog No.: SM1795P

Quantity: 0.2 mg

Concentration: 0.1 mg/ml

Background: CD45 is a family of single chain transmembraneous glycoproteins consisting of at least four isoforms (220, 205, 190, 180 kDa) which share a common large intracellular domain. Their extracellular domains are heavily glycosylated. The different isoforms are produced by alternative messenger RNA splicing of three exons of a single gene on chromosome 1. CD45 is expressed on cells of the human hematopoietic lineage (including hematopoietic stem cells) with the exception of mature red cells. It is not detected on differentiated cells of other tissues. It is likely that CD45 plays an important role in signal transduction, inhibition or upregulation of various immunological functions. Antibodies recognising a common epitope on all of the isoforms are termed CD45 whilst those recognising only individual isoforms are termed CD45RA or CD45RO etc.

Uniprot ID: P08575

NCBI: NP_002829.2

GeneID: 5788

Host / Isotype: Mouse / IgG2a

Clone: F-10-89-4

Immunogen: Human T lymphocytes
Remarks: Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.

Format: **State:** Liquid purified Ig fraction
Purification: Protein G Affinity Chromatography
Buffer System: PBS buffer pH 7.4 with 0.09% Sodium Azide as preservative and 1% BSA as stabilizer

Applications: Immunoprecipitation.
Flow Cytometry: Use 10 µl of of 1/10-1/50 diluted antibody to label 10e6 cells in 100 µl.
Immunohistochemistry on Frozen Sections: 1/500-1/1000
Immunohistochemistry on Paraffin Embedded Sections: 1/100-1/200. Requires antigen retrieval using heat treatment, 1mM EDTA pH8.0 is recommended for this purpose.
Recommended Positive Control Tissue: Human tonsil.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

Recognises the Human CD45 cell surface antigen, also known as the leucocyte common antigen (LCA). CD45 is a complex molecule existing in a number of isoforms.
Antibodies recognising a common epitope on all of these isoforms are termed CD45 whilst those recognising only individual isoforms are termed CD45RA or CD45RO etc.
Clone F10-89-4 reacts with all forms of CD45 expressed by all haematopoietic cells, except erythrocytes, having a higher level of expression on lymphocytes than on granulocytes.
This product is routinely tested in Flow Cytometry on Human peripheral blood leucocytes.
Species: Human.
Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: One year from despatch.

General References:

1. Dalchau, R. et al. (1980) Monoclonal antibody to a human leukocyte-specific membrane glycoprotein probably homologous to the leukocyte-common (L-C) antigen of the rat Eur. J. Immunol. 10: 737-744.
2. Quenby, S et al. (1999) Pre-implantation endometrial leukocytes in women with recurrent miscarriage. Human Reprod. 14(9):2386-2391.
3. Sallustio, F. et al. (2010) TLR2 plays a role in the activation of human resident renal stem/progenitor cells. FASEB J. 24: 514-25
4. Hauser, P.V. et al. (2010) Stem cells derived from human amniotic fluid contribute to acute kidney injury recovery. Am J Pathol. 177: 2011-21.
5. Mallam, E. et al. (2010) Characterization of in vitro expanded bone marrow-derived mesenchymal stem cells from patients with multiple sclerosis. Mult Scler. 16: 909-18.
6. Marrinucci, D. et al. (2010) Cytomorphology of circulating colorectal tumor cells:a small case series. J Oncol. 2010: 861341.