

**SM255P****Monoclonal Antibody to CD4 (Domain 1) - Purified**

<b>Alternate names:</b>	T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4
<b>Quantity:</b>	0.25 mg
<b>Concentration:</b>	1.0 mg/ml
<b>Background:</b>	CD4 is a single chain transmembrane glycoprotein (59 kDa) which belongs to the immunoglobulin superfamily. CD4 is present on a subset of T lymphocytes ("helper/inducer" T cells) and is also expressed at a lower level on monocytes, tissue macrophages and granulocytes. The antigen is involved in binding to MHC class II molecules. The intracellular domain of the antigen is associated with p56lck protein tyrosine kinase.
<b>Uniprot ID:</b>	<a href="#">P05540</a>
<b>NCBI:</b>	<a href="#">10116</a>
<b>GeneID:</b>	<a href="#">24932</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Recommended Isotype Controls:</b>	SM20P (for use in rat samples), AM03095PU-N
<b>Clone:</b>	W3/25
<b>Immunogen:</b>	Rat Thymocyte Membrane Glycoproteins. Spleen cells from immunised BALB/c mice were fused with cells of the NS-1 mouse myeloma cell line.
<b>Format:</b>	<b>State:</b> Liquid purified IgG fraction from Tissue Culture Supernatant <b>Purification:</b> Affinity Chromatography on Protein G <b>Buffer System:</b> PBS <b>Preservatives:</b> 0.09% Sodium Azide
<b>Applications:</b>	<b>Flow Cytometry:</b> Use 10 µl of 1/100-1/200 diluted antibody to label 10 <sup>6</sup> cells in 100 µl. Routinely tested on Rat splenocytes. <b>Immunohistochemistry on Frozen Sections.</b> <b>Immunohistochemistry on Paraffin Sections:</b> PLP fixation is recommended for optimal results, See <i>Whiteland et al.</i> for details. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	This antibody recognises the CD4 cell surface glycoprotein, a 55kD molecule expressed by helper T cells and weakly by monocytes. This antibody inhibits proliferation and IL-2 production in the MLR reaction. This clone has been described reacting with paraffin-embedded material following PLP fixation (periodatylsine-paraformaldehyde). <b>Species:</b> Rat. Other species not tested.

**Storage:**

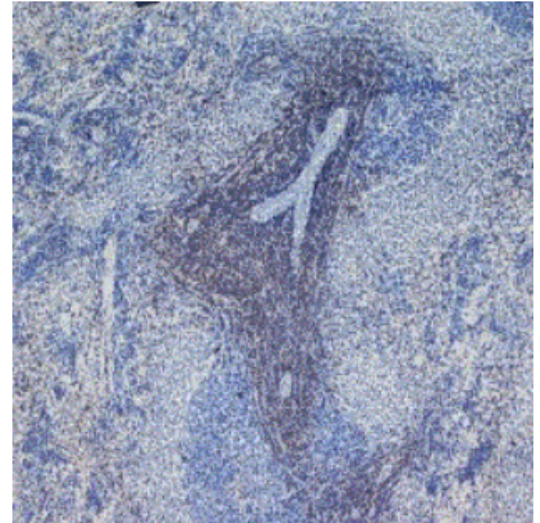
Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.  
Avoid repeated freezing and thawing.  
Shelf life: one year from despatch.

**General Readings:**

1. Williams AF, Galfrè G, Milstein C. Analysis of cell surfaces by xenogeneic myeloma-hybrid antibodies: differentiation antigens of rat lymphocytes. *Cell*. 1977 Nov;12(3):663-73. PubMed PMID: 303545.
2. Barclay AN. The localization of populations of lymphocytes defined by monoclonal antibodies in rat lymphoid tissues. *Immunology*. 1981 Apr;42(4):593-600. PubMed PMID: 7016746.
3. Whiteland JL, Nicholls SM, Shimeld C, Easty DL, Williams NA, Hill TJ. Immunohistochemical detection of T-cell subsets and other leukocytes in paraffin-embedded rat and mouse tissues with monoclonal antibodies. *J Histochem Cytochem*. 1995 Mar;43(3):313-20. PubMed PMID: 7868861.
4. Pelegrí C, Franch A, Castellote C, Castell M. Immunohistochemical changes in synovial tissue during the course of adjuvant arthritis. *J Rheumatol*. 1995 Jan;22(1):124-32. PubMed PMID: 7535358.
5. Hofmann N, Lachnit N, Streppel M, Witter B, Neiss WF, Guntinas-Lichius O, et al. Increased expression of ICAM-1, VCAM-1, MCP-1, and MIP-1 alpha by spinal perivascular macrophages during experimental allergic encephalomyelitis in rats. *BMC Immunol*. 2002 Aug 26;3:11. PubMed PMID: 12196270.
6. Zilka N, Stozicka Z, Kovac A, Pilipcinec E, Bugos O, Novak M. Human misfolded truncated tau protein promotes activation of microglia and leukocyte infiltration in the transgenic rat model of tauopathy. *J Neuroimmunol*. 2009 Apr 30;209(1-2):16-25. doi: 10.1016/j.jneuroim.2009.01.013. Epub 2009 Feb 20. PubMed PMID: 19232747.
7. Schwartzkopff J, Schlereth SL, Berger M, Bredow L, Birnbaum F, Böhringer D, et al. NK cell depletion delays corneal allograft rejection in baby rats. *Mol Vis*. 2010 Oct 2;16:1928-35. PubMed PMID: 21031017.
8. Banerjee S, Figueiredo FC, Easty DL, Dick AD, Nicholls SM. Development of organised conjunctival leucocyte aggregates after corneal transplantation in rats. *Br J Ophthalmol*. 2003 Dec;87(12):1515-22. PubMed PMID: 14660464.
9. Bjersing JL, Telemo E, Dahlgren U, Hanson LA. Loss of ileal IgA+ plasma cells and of CD4+ lymphocytes in ileal Peyer's patches of vitamin A deficient rats. *Clin Exp Immunol*. 2002 Dec;130(3):404-8. PubMed PMID: 12452829.

**Pictures:**

Staining of Frozen Rat spleen with Mouse anti Rat CD4 Antibody



Staining of stimulated Rat spleen cells with Mouse Anti Rat CD4 Antibody (Cat.-No SM255P).

