

SM587R**Monoclonal Antibody to CD4 - PE**

Alternate names:	T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4, T4/Leu-3
Quantity:	100 Tests
Background:	CD4 is a single chain transmembraneous 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.
Host / Isotype:	Mouse / IgG1
Clone:	CT7
Immunogen:	Guinea Pig peritoneal T-cells. Remarks: Spleen cells from immunised BALB/c mice were fused with cells of the X63.Ag8.653 mouse myeloma cell line.
Format:	State: Lyophilized purified IgG fraction Purification: Affinity chromatography on Protein G Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide and 1% BSA Label: PE – R. Phycoerythrin (RPE) Reconstitution: Restore with 1.0ml distilled water
Applications:	Flow Cytometry. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody recognizes the CD4 antigen present on T Helper/Inducer lymphocytes. Species: Guinea Pig. Other species not tested.
Storage:	Store the antibody undiluted at 2-8°C for one month. DO NOT FREEZE! This product is photosensitive and should be protected from light. Shelf life: one year from despatch.
General Readings:	1. Tan BT, Ekelaar F, Luirink J, Rimmelzwaan G, De Jonge AJ, Scheper RJ. Production of monoclonal antibodies defining guinea pig T-cell surface markers and a strain 13 Ia-like antigen: the value of immunohistological screening. <i>Hybridoma</i> . 1985 Summer;4(2):115-24. PubMed PMID: 3891587. 2. Baker D, Karcher K, Antoniou AV, Turk JL, Tan BT, Scheper RJ. Changes in lymphocyte subsets after treatment with cyclophosphamide and during the development of contact sensitivity in the guinea pig. <i>Int J Immunopharmacol</i> . 1987;9(2):175-83. PubMed PMID: 2884193. 3. Liversidge J, Forrester JV. Experimental autoimmune uveitis (EAU): immunophenotypic analysis of inflammatory cells in chorio retinal lesions. <i>Curr Eye Res</i> . 1988 Dec;7(12):1231-41. PubMed PMID: 3229134. 4. Steerenburg, P.A. et al. (1991) Tumour rejection after transfer of line-10-immunity is

- mediated by two T-cell populations. *Cancer Immun. Immunother.* 34: 103 - 110.
5. Debout C, Griveau AM, Izard J. The Kurloff cell in estrogenized guinea pigs as a CT7+ 8BE6- CT6- MR-1- CT10- IgM- lymphocyte with natural killer activity. *Nat Immun Cell Growth Regul.* 1991;10(6):327-35. PubMed PMID: 1787838.
 6. Shang, S. et al. (2010) The activity of TMC 207, rifampin, and pyrazinamide against *Mycobacterium tuberculosis* infection in guinea pigs. *Antimicrob Agents Chemother.* 2010 Oct 11. [Epub ahead of print]
 7. Lacy HM, Bowlin AK, Hennings L, Scurlock AM, Nagarajan UM, Rank RG. Essential role for neutrophils in pathogenesis and adaptive immunity in *Chlamydia caviae* ocular infections. *Infect Immun.* 2011 May;79(5):1889-97. doi: 10.1128/IAI.01257-10. Epub 2011 Mar 14. PubMed PMID: 21402767.
 8. Komori T, Nakamura T, Matsunaga I, Morita D, Hattori Y, Kuwata H, et al. A microbial glycolipid functions as a new class of target antigen for delayed-type hypersensitivity. *J Biol Chem.* 2011 May 13;286(19):16800-6. doi: 10.1074/jbc.M110.217224. Epub 2011 Mar 25. PubMed PMID: 21454504.
 9. Jeevan A, Yoshimura T, Lee KE, McMurray DN. Differential expression of gamma interferon mRNA induced by attenuated and virulent *Mycobacterium tuberculosis* in guinea pig cells after *Mycobacterium bovis* BCG vaccination. *Infect Immun.* 2003 Jan;71(1):354-64. PubMed PMID: 12496185.
 10. Schleiss MR, Lacayo JC, Belkaid Y, McGregor A, Stroup G, Rayner J, et al. Preconceptual administration of an alphavirus replicon UL83 (pp65 homolog) vaccine induces humoral and cellular immunity and improves pregnancy outcome in the guinea pig model of congenital cytomegalovirus infection. *J Infect Dis.* 2007 Mar 15;195(6):789-98. Epub 2007 Feb 6. PubMed PMID: 17299708.
 11. Turner OC, Basaraba RJ, Orme IM. Immunopathogenesis of pulmonary granulomas in the guinea pig after infection with *Mycobacterium tuberculosis*. *Infect Immun.* 2003 Feb;71(2):864-71. PubMed PMID: 12540568.
 12. Wang Y, Nagarajan U, Hennings L, Bowlin AK, Rank RG. Local host response to chlamydial urethral infection in male guinea pigs. *Infect Immun.* 2010 Apr;78(4):1670-81. doi: 10.1128/IAI.01339-09. Epub 2010 Feb 1. PubMed PMID: 20123720.
 13. Mishra NC, Rir-sima-ah J, March T, Weber W, Benson J, Jaramillo R, et al. Sulfur mustard induces immune sensitization in hairless guinea pigs. *Int Immunopharmacol.* 2010 Feb;10(2):193-9. doi: 10.1016/j.intimp.2009.10.015. Epub 2009 Nov 1. PubMed PMID: 19887117.
 14. Hiromatsu K, Dascher CC, LeClair KP, Sugita M, Furlong ST, Brenner MB, et al. Induction of CD1-restricted immune responses in guinea pigs by immunization with mycobacterial lipid antigens. *J Immunol.* 2002 Jul 1;169(1):330-9. PubMed PMID: 12077262.
 15. Dascher CC, Hiromatsu K, Naylor JW, Brauer PP, Brown KA, Storey JR, et al. Conservation of a CD1 multigene family in the guinea pig. *J Immunol.* 1999 Nov 15;163(10):5478-88. PubMed PMID: 10553074.
 16. Rousseau C, Turner OC, Rush E, Bordat Y, Sirakova TD, Kolattukudy PE, et al. Sulfolipid deficiency does not affect the virulence of *Mycobacterium tuberculosis* H37Rv in mice and guinea pigs. *Infect Immun.* 2003 Aug;71(8):4684-90. PubMed PMID: 12874349.

17. Kramp JC, McMurray DN, Formichella C, Jeevan A. The in vivo immunomodulatory effect of recombinant tumour necrosis factor-alpha in guinea pigs vaccinated with Mycobacterium bovis bacille Calmette-Guérin. Clin Exp Immunol. 2011 Jul;165(1):110-20. doi: 10.1111/j.1365-2249.2011.04406.x. Epub 2011 May 5. PubMed PMID: 21545584.

Pictures:

Staining of Guinea Pig spleen cells with Mouse anti Guinea Pig CD4 antibody RPE conjugated (SM587R)

