

**SM497R****Monoclonal Antibody to CD4 - PE**

<b>Alternate names:</b>	T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4
<b>Quantity:</b>	100 Tests
<b>Background:</b>	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.
<b>Uniprot ID:</b>	<a href="#">F6Y6X8</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Recommended Isotype Controls:</b>	AM03095PU-N
<b>Clone:</b>	CVS4
<b>Immunogen:</b>	Equine thymocytes. Spleen cells from immunised mice were fused with cells of the X63-Ag 8.653 mouse myeloma cell line.
<b>Format:</b>	<b>State:</b> Lyophilised purified IgG fraction from Tissue Culture Supernatant <b>Purification:</b> Affinity Chromatography on Protein G <b>Preservatives:</b> 0.09% Sodium Azide <b>Stabilizers:</b> 1% BSA, 5% Sucrose <b>Label:</b> PE – R. Phycoerythrin <b>Reconstitution:</b> Restore with 1.0 ml distilled water.
<b>Applications:</b>	<b>Flow Cytometry:</b> Use 10 µl of neat antibody to label 10 <sup>6</sup> cells in 100 µl. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	This antibody CVS4 recognizes Equine CD4, a 58kDa cell surface glycoprotein that is primarily expressed on a subpopulation of equine T lymphocytes and considered to be the equine homologue of human CD4. A study undertaken using Mouse anti Horse CD4, clone CVS4 to identify CD4 on several wild african equid species indicates that the CVS4 clone recognizes Somali wild ass ( <i>Equus asinus</i> ) but not Grévy's Zebra ( <i>E. grevyi</i> ) or Hartmann's Mountain Zebra ( <i>E. zebra</i> ).
<b>Species Reactivity:</b>	<b>Tested:</b> Equine (Horse).
<b>Storage:</b>	Prior to and following reconstitution store the antibody at 2-8°C. <b>DO NOT FREEZE!</b> This product is photosensitive and should be protected from light. Shelf life: one year from despatch.

**Product Citations:**

**Originator or purchased from resellers:**

1. Goodman LB, Loregian A, Perkins GA, Nugent J, Buckles EL, Mercorelli B, et al. A point mutation in a herpesvirus polymerase determines neuropathogenicity. *PLoS Pathog.* 2007 Nov;3(11):e160. PubMed PMID: 17997600.
2. Go YY, Zhang J, Timoney PJ, Cook RF, Horohov DW, Balasuriya UB. Complex interactions between the major and minor envelope proteins of equine arteritis virus determine its tropism for equine CD3+ T lymphocytes and CD14+ monocytes. *J Virol.* 2010 May;84(10):4898-911. doi: 10.1128/JVI.02743-09. Epub 2010 Mar 10. PubMed PMID: 20219931.

**General Readings:**

1. Lunn DP, Holmes MA, Duffus WP. Three monoclonal antibodies identifying antigens on all equine T lymphocytes, and two mutually exclusive T-lymphocyte subsets. *Immunology.* 1991 Oct;74(2):251-7. PubMed PMID: 1748472.
2. Kydd, J.H. and Antczak, D.F., (1991) First International Workshop on Equine Leucocyte Antigens. *Equine Immunol.* 4 - 5.
3. Deeg CA, Reese S, Gerhards H, Wildner G, Kaspers B. The uveitogenic potential of retinal S-antigen in horses. *Invest Ophthalmol Vis Sci.* 2004 Jul;45(7):2286-92. PubMed PMID: 15223807.
4. Pearson W, Omar S, Clarke AF. Low-dose ginseng (*Panax quinquefolium*) modulates the course and magnitude of the antibody response to vaccination against equid herpesvirus 1 in horses. *Can J Vet Res.* 2007 Jul;71(3):213-7. PubMed PMID: 17695597.
5. Brault SA, Blanchard MT, Gardner IA, Stott JL, Pusterla N, Mapes SM, et al. The immune response of foals to natural infection with equid herpesvirus-2 and its association with febrile illness. *Vet Immunol Immunopathol.* 2010 Sep 15;137(1-2):136-41. doi: 10.1016/j.vetimm.2010.05.010. Epub 2010 Jun 1. PubMed PMID: 20646766.
6. Hamza E, Steinbach F, Marti E. CD4+CD25+ T cells expressing FoxP3 in Icelandic horses affected with insect bite hypersensitivity. *Vet Immunol Immunopathol.* 2012 Jul 15;148(1-2):139-44. doi: 10.1016/j.vetimm.2011.05.033. Epub 2011 Jun 6. PubMed PMID: 21700344.
7. Lunn DP, Holmes MA, Antczak DF, Agerwal N, Baker J, Bendali-Ahcene S, et al. Report of the Second Equine Leucocyte Antigen Workshop, Squaw valley, California, July 1995. *Vet Immunol Immunopathol.* 1998 Mar 31;62(2):101-43. PubMed PMID: 9638857.

**Pictures:**

Horse peripheral blood lymphocytes stained with mouse anti horse CD4 antibody clone CVS4 Cat.-No SM497R.

