

SM415F**Monoclonal Antibody to CD45 - FITC**

Alternate names:	CD45R, CD45RA, CD45RB, CD45RO, L-CA, Leukocyte common antigen, PTPRC, T200
Quantity:	0.1 mg
Concentration:	0.1 mg/ml
Background:	CD45 is expressed on all leukocytes in canine peripheral blood and may be against the CD45RB isoform.
Host / Isotype:	Rat / IgG2b
Clone:	YKIX716.13
Immunogen:	Canine thymocytes. Spleen cells from immunised DA rat were fused with cells of the Y3/A1.2.3 rat myeloma cell line.
Format:	State: Liquid purified IgG fraction Purification: Affinity chromatography on Protein G Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide and 1% Bovine Serum Albumin Label: FITC – Fluorescein Isothiocyanate Isomer 1
Applications:	Flow Cytometry: Neat-1/5. Use 10 µl of the suggested working dilution to label 10e6 cells in 100 µl. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody, clone YKIX 716.13, was clustered as CD45 in the First Canine Leucocyte Antigen Workshop (CLAW). This antibody reacts with CD45 on all outbred mongrels and beagles tested. Species: Dog. 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. This product is photosensitive and should be protected from light. Shelf life: one year from despatch.
General Readings:	1. Cobbold S, Metcalfe S. Monoclonal antibodies that define canine homologues of human CD antigens: summary of the First International Canine Leukocyte Antigen Workshop (CLAW). <i>Tissue Antigens</i> . 1994 Mar;43(3):137-54. PubMed PMID: 8091414. 2. Reis AB, Teixeira-Carvalho A, Giunchetti RC, Guerra LL, Carvalho MG, Mayrink W, et al. Phenotypic features of circulating leucocytes as immunological markers for clinical status and bone marrow parasite density in dogs naturally infected by <i>Leishmania chagasi</i> . <i>Clin Exp Immunol</i> . 2006 Nov;146(2):303-11. PubMed PMID: 17034583. 3. Stein VM, Schreiner NM, Moore PF, Vandeveld M, Zurbriggen A, Tipold A. Immunophenotypical characterization of monocytes in canine distemper virus infection. <i>Vet Microbiol</i> . 2008 Oct 15;131(3-4):237-46. doi: 10.1016/j.vetmic.2008.03.009. Epub 2008 Apr 1. PubMed PMID: 18472370. 4. Sanchez MA, Diaz NL, Zerpa O, Negron E, Convit J, Tapia FJ. Organ-specific immunity in canine visceral leishmaniasis: analysis of symptomatic and asymptomatic dogs

- naturally infected with *Leishmania chagasi*. *Am J Trop Med Hyg.* 2004 Jun;70(6):618-24. PubMed PMID: 15211002.
5. Modiano, J.F. and Helfand, S.C. (2011) Early detection of hemangiosarcoma and angiosarcoma Patent Application No.11/662529
 6. Tominaga M, Horiuchi Y, Ichikawa M, Yamashita M, Okano K, Jikumaru Y, et al. Flow cytometric analysis of peripheral blood and tumor-infiltrating regulatory T cells in dogs with oral malignant melanoma. *J Vet Diagn Invest.* 2010 May;22(3):438-41. PubMed PMID: 20453222.
 7. Zentek, J. et al. (2002) Morphology and immunopathology of the small and large intestine in dogs with nonspecific dietary sensitivity. *J Nutr.* 132: 1652S-4S.
 8. Hunter MJ, Tuschong LM, Fowler CJ, Bauer TR, Burkholder TH, Hickstein DD. Gene therapy of canine leukocyte adhesion deficiency using lentiviral vectors with human CD11b and CD18 promoters driving canine CD18 expression. *Mol Ther.* 2011 Jan;19(1):113-21. doi: 10.1038/mt.2010.203. Epub 2010 Sep 21. PubMed PMID: 20859258.
 9. Comazzi S, Gelain ME, Spagnolo V, Riondato F, Guglielmino R, Sartorelli P. Flow cytometric patterns in blood from dogs with non-neoplastic and neoplastic hematologic diseases using double labeling for CD18 and CD45. *Vet Clin Pathol.* 2006 Mar;35(1):47-54. PubMed PMID: 16511791.
 10. Giantin M, Aresu L, Aricò A, Gelain ME, Riondato F, Martini V, et al. Evaluation of tyrosine-kinase receptor c-KIT (c-KIT) mutations, mRNA and protein expression in canine leukemia: might c-KIT represent a therapeutic target? *Vet Immunol Immunopathol.* 2013 Apr 15;152(3-4):325-32. doi: 10.1016/j.vetimm.2013.01.003. Epub 2013 Jan 16. PubMed PMID: 23375718.
 11. Trichler SA, Bulla SC, Thomason J, Lunsford KV, Bulla C. Ultra-pure platelet isolation from canine whole blood. *BMC Vet Res.* 2013 Jul 17;9:144. doi: 10.1186/1746-6148-9-144. PubMed PMID: 23866028.
 12. Aresu L, Aricò A, Comazzi S, Gelain ME, Riondato F, Mortarino M, et al. VEGF and MMP-9: biomarkers for canine lymphoma. *Vet Comp Oncol.* 2014 Mar;12(1):29-36. doi: 10.1111/j.1476-5829.2012.00328.x. Epub 2012 Apr 10. PubMed PMID: 22489798.
 13. Salinas Tejedor, L. et al. (2015) Mesenchymal stem cells do not exert direct beneficial effects on CNS remyelination in the absence of the peripheral immune system. *Brain Behav Immun.* pii: S0889-1591(15)00233-0.

Pictures:

Staining of canine peripheral blood lymphocytes with rat anti-canine CD45: FITC (SM415F)

