



1F-679-C100

Monoclonal Antibody to CD4 (rat) Fluorescein (FITC) conjugated (0.1 mg)

Clone:	OX-35
Isotype:	Mouse IgG2a
Specificity:	The mouse monoclonal antibody OX-35 reacts with an extracellular epitope of rat CD4 transmembrane glycoprotein (55 kDa).
Regulatory Status:	RUO
Immunogen:	MLR generated rat Th cells
Species Reactivity:	Rat
Preparation:	The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.
Concentration:	0.5 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
Usage:	The reagent is designed for Flow Cytometry analysis.
Expiration:	See vial label
Lot Number:	See vial label
Background:	CD4 is a single chain transmembrane glycoprotein of immunoglobulin supergene family. In its extracellular region there are 4 immunoglobulin-like domains (1 Ig-like V-type and 3 Ig-like C2-type). The intracellular region of CD4 associates with p56Lck, a Src-like protein tyrosine kinase. It was described that CD4 segregates into specific detergent-resistant T-cell membrane microdomains. CD4 binds to MHC class II molecules (by CDR2-like region in CD4 domain 1), HIV envelope protein gp120 (by CDR2-like region in CD4 domain 1) and other ligands, such as IL-16 (by to CD4 domain 3) or L-selectin. CD4 is a co-receptor involved in immune response (co-receptor activity in binding to MHC class II molecules) and HIV infection. CD4 regulates T-cell activation, T/B-cell adhesion, T-cell differentiation, T-cell selection and signal transduction. Defects in antigen presentation (MHC class II) cause dysfunction of CD4+ T-cells and their almost complete absence in patients blood, tissue and organs (SCID immunodeficiency).

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****References:**

- *Dragun D, Lukitsch I, Tullius SG, Qun Y, Park JK, Schneider W, Luft FC, Haller H: Inhibition of intercellular adhesion molecule-1 with antisense deoxynucleotides prolongs renal isograft survival in the rat. *Kidney Int.* 1998 Dec;54(6):2113-22.
- *Tsuji H, Kawaguchi S, Wada T, Nagoya S, Inobe M, Yamashita T, Ishii S, Uede T: Adenovirus-mediated in vivo B7-1 gene transfer induces anti-tumor immunity against pre-established primary tumor and pulmonary metastasis of rat osteosarcoma. *Cancer Gene Ther.* 2002 Sep;9(9):747-55.
- *Salomon I, Netzer N, Wildbaum G, Schif-Zuck S, Maor G, Karin N: Targeting the function of IFN-gamma-inducible protein 10 suppresses ongoing adjuvant arthritis. *J Immunol.* 2002 Sep 1;169(5):2685-93.
- *Yan Y, Devos T, Yu L, Xia G, Rutgeerts O, Goebels J, Segers C, Lin Y, Vandeputte M, Waer M: Pathogenesis of autoimmunity after xenogeneic thymus transplantation. *J Immunol.* 2003 Jun 15;170(12):5936-46.
- *Hishikari K, Suzuki J, Ogawa M, Isobe K, Takahashi T, Onishi M, Takayama K, Isobe M: Pharmacological activation of the prostaglandin E2 receptor EP4 improves cardiac function after myocardial ischaemia/reperfusion injury. *Cardiovasc Res.* 2009 Jan 1;81(1):123-32.
- *Gelderman KA, Hultqvist M, Holmberg J, Olofsson P, Holmdahl R: T cell surface redox levels determine T cell reactivity and arthritis susceptibility. *Proc Natl Acad Sci U S A.* 2006 Aug 22;103(34):12831-6.
- *Ramiro-Puig E, Pérez-Cano FJ, Ramos-Romero S, Pérez-Berezo T, Castellote C, Permanyer J, Franch A, Izquierdo-Pulido M, Castell M: Intestinal immune system of young rats influenced by cocoa-enriched diet. *J Nutr Biochem.* 2008 Aug;19(8):555-65.
- *Viel EC, Lemarié CA, Benkirane K, Paradis P, Schiffrin EL: Immune regulation and vascular inflammation in genetic hypertension. *Am J Physiol Heart Circ Physiol.* 2010 Mar;298(3):H938-44.
- *Baba T, Iwasaki S, Maruoka T, Suzuki A, Tomaru U, Ikeda H, Yoshiki T, Kasahara M, Ishizu A: Rat CD4+CD8+ macrophages kill tumor cells through an NKG2D- and granzyme/perforin-dependent mechanism. *J Immunol.* 2008 Mar 1;180(5):2999-3006.
- *Baba T, Ishizu A, Iwasaki S, Suzuki A, Tomaru U, Ikeda H, Yoshiki T, Kasahara M: CD4+/CD8+ macrophages infiltrating at inflammatory sites: a population of monocytes/macrophages with a cytotoxic phenotype. *Blood.* 2006 Mar 1;107(5):2004-12.
- *Monzon-Casanova E, Steiniger B, Schweigle S, Clemen H, Zdzieblo D, Starick L, Müller I, Wang CR, Rhost S, Cardell S, Pyz E, Herrmann T: CD1d expression in paneth cells and rat exocrine pancreas revealed by novel monoclonal antibodies which differentially affect NKT cell activation. *PLoS One.* 2010 Sep 30;5(9). pii: e13089.

Unless indicated otherwise, all products are For Research Use Only and not for diagnostic or therapeutic use. Not for resale or transfer either as a stand-alone product or as a component of another product without written consent of EXBIO. EXBIO will not be held responsible for patent infringement or other violations that may occur with the use of our products. All orders are accepted subject to EXBIO's term and conditions which are available at www.exbio.cz.

For laboratory research only, not for drug, diagnostic or other use.

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz