

TECHNICAL DATA SHEET

CyFlow™ CD4 APC Anti-Rt; Clone OX-35

REF CS372844

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD4
Alternative Names	T4, Leu3a
Clone	OX-35
Clonality	monoclonal
Format	APC
Host / Isotype	Mouse / IgG2a
Species Reactivity	Rat
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [0.5 mg/ml]
Immunogen	MLR generated rat Th cells

Specificity

The mouse monoclonal antibody OX-35 recognizes an extracellular epitope of rat CD4 transmembrane glycoprotein (55 kDa).

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

Application

The reagent is designed for Flow Cytometry analysis. Working concentrations should be determined by the investigator.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH $\approx$ 7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

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).

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. < PMID: 9853277 >
- 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. < PMID: 12193742 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- 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. < PMID: 12189524 >
- 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. < PMID: 12794120 >
- 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. < PMID: 16269616 >
- 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 USA.* 2006 Aug 22; 103(34):12831-6. < PMID: 16908843 >
- 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. < PMID: 18292522 >
- 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. < PMID: 18061430 >
- 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. < PMID: 18805784 >
- 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. < PMID: 20044442 >
- 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. < PMID: 20927351 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
 Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com