

1F-653-C100

Monoclonal Antibody to TCR alpha/beta (rat) Fluorescein (FITC) conjugated (0.1 mg)

Clone: R73

Isotype: Mouse IgG1

Specificity: The mouse monoclonal R73 recognizes TCR alpha/beta, the dominant subtype of

T cell receptor expressed in peripheral blood.

Regulatory Status: RUO

Immunogen: Rat T blasts and erythrocytes

Species Reactivity: Non-Human Primates, 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: The antigen-specific T cell receptor (TCR) is composed of either alpha and beta

subunit, or gamma and delta subunit. Majority of T cells present in the blood, lymph and secondary lymphoid organs express TCR alpha/beta heterodimers, whereas the T cells expressing TCR gamma/delta heterodimers are localized mainly in epithelial tissues and at the sites of infection. The subunits of TCR heterodimers are covalently bonded and in the endoplasmic reticulum they associate with CD3 subunits to form functional TCR-CD3 complex. Lack of

expression of any of the chains is sufficient to stop cell surface expression.





References:

*Radojevic K, Arsenovic-Ranin N, Kosec D, Pesic V, Pilipovic I, Perisic M, Plecas-Solarovic B, Leposavic G: Neonatal castration affects intrathymic kinetics of T-cell differentiation and the spleen T-cell level. J Endocrinol. 2007 Mar;192(3):669-82.

*Ritter T, Schröder G, Risch K, Vergopoulos A, Shean MK, Kolls J, Brock J, Lehmann M, Volk HD: Ischemia/reperfusion injury-mediated down-regulation of adenovirus-mediated gene expression in a rat heart transplantation model is inhibited by co-application of a TNFRp55-Ig chimeric construct. Gene Ther. 2000 Jul;7(14):1238-43.

*Fuller JM, Bogdani M, Tupling TD, Jensen RA, Pefley R, Manavi S, Cort L, Blankenhorn EP, Mordes JP, Lernmark A, Kwitek AE: Genetic dissection reveals diabetes loci proximal to the gimap5 lymphopenia gene. Physiol Genomics. 2009 Jun 10;38(1):89-97.

*Hünig T, Wallny HJ, Hartley JK, Lawetzky A, Tiefenthaler G: A monoclonal antibody to a constant determinant of the rat T cell antigen receptor that induces T cell activation. Differential reactivity with subsets of immature and mature T lymphocytes. J Exp Med. 1989 Jan 1;169(1):73-86.

*Kreiss M, Asmuss A, Krejci K, Lindemann D, Miyoshi-Akiyama T, Uchiyama T, Rink L, Broeren CP, Herrmann T: Contrasting contributions of complementarity-determining region 2 and hypervariable region 4 of rat BV8S2+ (Vbeta8.2) TCR to the recognition of myelin basic protein and different types of bacterial superantigens. Int Immunol. 2004 May;16(5):655-63.

*Wilhelm MJ, Pratschke J, Beato F, Taal M, Kusaka M, Hancock WW, Tilney NL: Activation of the heart by donor brain death accelerates acute rejection after transplantation. Circulation. 2000 Nov 7;102(19):2426-33.

*Hansson AS, Heinegård D, Holmdahl R: A new animal model for relapsing polychondritis, induced by cartilage matrix protein (matrilin-1). J Clin Invest. 1999 Sep;104(5):589-98.

*Müller N, van den Brandt J, Odoardi F, Tischner D, Herath J, Flügel A, Reichardt HM: A CD28 superagonistic antibody elicits 2 functionally distinct waves of T cell activation in rats. J Clin Invest. 2008 Apr;118(4):1405-16.

*Li S, Thanikachalam M, Pang M, Kawaharada N, Aitouche A, Pham SM: A clinically relevant CTLA4-Ig-based regimen induces chimerism and tolerance to heart grafts. Ann Thorac Surg. 2001 Oct;72(4):1306-10.

*Shao H, Sun SL, Kaplan HJ, Sun D: Characterization of rat CD8+ uveitogenic T cells specific for interphotoreceptor retinal-binding protein 1177-1191: J Immunol. 2004 Aug 15:173(4):2849-54.

*Carlson BC, Jansson AM, Larsson A, Bucht A, Lorentzen JC: The endogenous adjuvant squalene can induce a chronic T-cell-mediated arthritis in rats. Am J Pathol. 2000 Jun;156(6):2057-65.

*Kerstan A, Hünig T: Cutting edge: distinct TCR- and CD28-derived signals regulate CD95L, Bcl-xL, and the survival of primary T cells. J Immunol. 2004 Feb 1;172(3):1341-5.

*Kraus E, Lambracht D, Wonigeit K, Hünig T: Negative regulation of rat natural killer cell activity by major histocompatibility complex class I recognition. Eur J Immunol. 1996 Nov;26(11):2582-6.

*And many other.

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.