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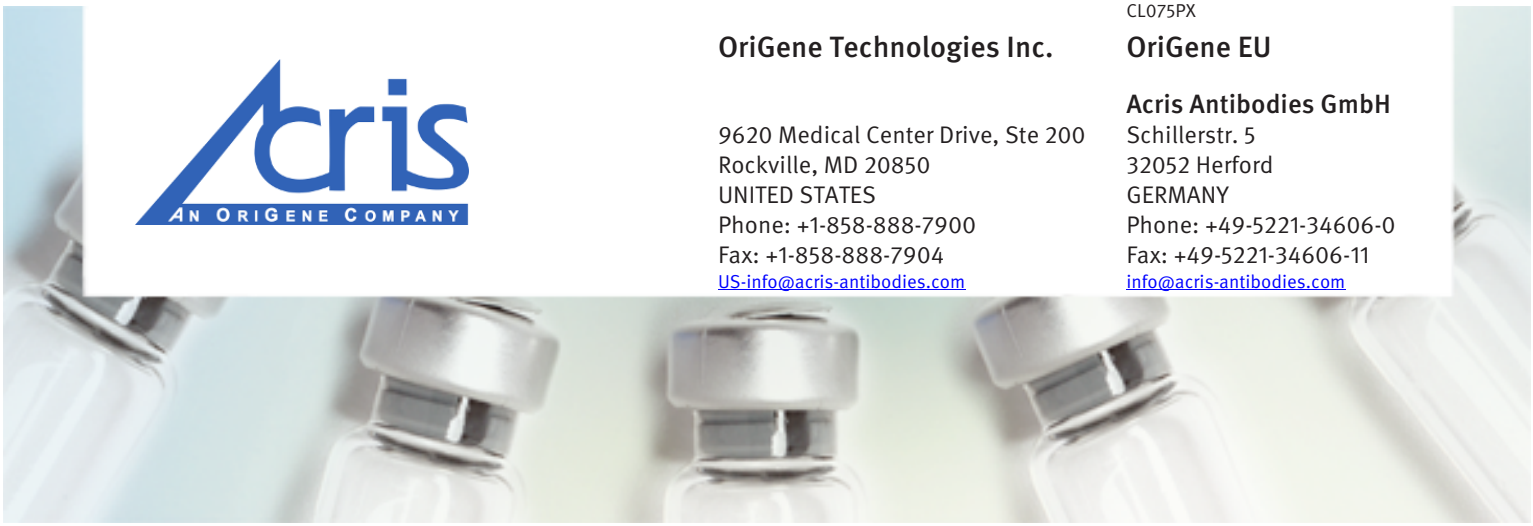

Monoclonal Antibody to T Cell Receptor (TCR) alpha/beta - Purified

Alternate names: T-Cell Receptor alpha, T-Cell Receptor alpha beta, T-Cell Receptor beta, TCRA, TCRB

Catalog No.: CL075PX

Quantity: 0.1 mg

Concentration: 1.0 mg/ml

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.

Host / Isotype: Hamster / IgG

Clone: H57-597

Immunogen: Affinity purified TCR from DO-11.10 T cell hybridoma

Format:
State: Liquid Ig fraction
Purification: Protein-A affinity chromatography
Buffer System: Phosphate buffered saline (PBS)
Preservatives: 15 mM sodium azide, approx. pH 7.4

Applications:
Flow cytometry: 1-2 µg/ml per 1 million cells.
Immunoprecipitation: 1-2 µg / 100-500 µg of protein in 1 ml lysate.
Immunohistochemistry on paraffin sections.
Immunohistochemistry on frozen sections.
Immunocytochemistry.
Funtional application: In vitro T cell stimulation; In vivo T cell depletion.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody reacts specifically with beta subunit of TCR alpha/beta. This antibody does not crossreact with TCR gamma/delta type and has been used as TCR alpha/beta phenotypic marker.

Species Reactivity: **Tested:** Mouse

Storage: Store undiluted at 2-8°C.
DO NOT FREEZE!
Shelf life: one year from despatch.

General Readings:

1. Kubo RT, Born W, Kappler JW, Marrack P, Pigeon M. Characterization of a monoclonal antibody which detects all murine alpha beta T cell receptors. J Immunol. 1989 Apr 15;142(8):2736-42. PubMed PMID: 2467936.
2. Goodman T, Lefrancois L. Intraepithelial lymphocytes. Anatomical site, not T cell receptor form, dictates phenotype and function. J Exp Med. 1989 Nov 1;170(5):1569-81. PubMed PMID: 2572671.
3. Gascoigne NR. Transport and secretion of truncated T cell receptor beta-chain occurs in the absence of association with CD3. J Biol Chem. 1990 Jun 5;265(16):9296-301. PubMed PMID: 2140571.
4. Skeen MJ, Ziegler HK. Intercellular interactions and cytokine responsiveness of peritoneal alpha/beta and gamma/delta T cells from Listeria-infected mice: synergistic effects of interleukin 1 and 7 on gamma/delta T cells. J Exp Med. 1993 Sep 1;178(3):985-96. PubMed PMID: 8350064.
5. Skeen MJ, Ziegler HK. Induction of murine peritoneal gamma/delta T cells and their role in resistance to bacterial infection. J Exp Med. 1993 Sep 1;178(3):971-84. PubMed PMID: 8350063.
6. McCormack JE, Kappler J, Marrack P. Stimulation with specific antigen can block superantigen-mediated deletion of T cells in vivo. Proc Natl Acad Sci U S A. 1994 Mar 15;91(6):2086-90. PubMed PMID: 8134353.
7. van der Heyde HC, Elloso MM, Chang WL, Kaplan M, Manning DD, Weidanz WP. Gamma delta T cells function in cell-mediated immunity to acute blood-stage Plasmodium chabaudi adami malaria. J Immunol. 1995 Apr 15;154(8):3985-90. PubMed PMID: 7706737.
8. Kishimoto H, Kubo RT, Yorifuji H, Nakayama T, Asano Y, Tada T. Physical dissociation of the TCR-CD3 complex accompanies receptor ligation. J Exp Med. 1995 Dec 1;182(6):1997-2006. PubMed PMID: 7500045.
9. Rozdzial MM, Kubo RT, Turner SL, Finkel TH. Developmental regulation of the TCR zeta-chain. Differential expression and tyrosine phosphorylation of the TCR zeta-chain in resting immature and mature T lymphocytes. J Immunol. 1994 Aug 15;153(4):1563-80. PubMed PMID: 7519206.
10. Oliver PM, Cao X, Worthen GS, Shi P, Briones N, MacLeod M, et al. Ndfip1 protein promotes the function of itch ubiquitin ligase to prevent T cell activation and T helper 2 cell-mediated inflammation. Immunity. 2006 Dec;25(6):929-40. Epub 2006 Nov 30. PubMed PMID: 17137798.