

## Monoclonal Antibody to T Cell Receptor (TCR) gamma/delta - FITC

<b>Alternate names:</b>	T-Cell Receptor delta, T-Cell Receptor gamma, T-Cell Receptor gamma delta, TCRD, TCRG
<b>Catalog No.:</b>	SM093F
<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	0.1 mg/ml
<b>Background:</b>	<p>T cell receptors recognize foreign antigens which have been processed as small peptides and bound to major histocompatibility complex (MHC) molecules at the surface of antigen presenting cells (APC). Each T cell receptor is a dimer consisting of one alpha and one beta chain or one delta and one gamma chain. In a single cell, the T cell receptor loci are rearranged and expressed in the order delta, gamma, beta, and alpha. If both delta and gamma rearrangements produce functional chains, the cell expresses delta and gamma. If not, the cell proceeds to rearrange the beta and alpha loci. This region represents the germline organization of the T cell receptor beta locus. The beta locus includes V (variable), J (joining), diversity (D), and C (constant) segments. During T cell development, the beta chain is synthesized by a recombination event at the DNA level joining a D segment with a J segment; a V segment is then joined to the D-J gene. The C segment is later joined by splicing at the RNA level. Recombination of many different V segments with several J segments provides a wide range of antigen recognition. Additional diversity is attained by junctional diversity, resulting from the random additional of nucleotides by terminal deoxynucleotidyltransferase. Several V segments and one J segment of the beta locus are known to be incapable of encoding a protein and are considered pseudogenes. The beta locus also includes eight trypsinogen genes, three of which encode functional proteins and five of which are pseudogenes. Chromosomal abnormalities involving the T-cell receptor beta locus have been associated with T-cell lymphomas.</p>
<b>Host / Isotype:</b>	Hamster / IgG
<b>Clone:</b>	GL3
<b>Immunogen:</b>	<p>C57BL/6J intra epithelial lymphocytes. Spleen cells from an immunised Armenian hamster were fused with cells of the murine myeloma SP2/0 myeloma cell line.</p>
<b>Format:</b>	<p><b>State:</b> Liquid purified IgG fraction. <b>Purification:</b> Affinity Chromatography on Protein A <b>Buffer System:</b> Contains 0.09% Sodium Azide as preservative and 0.5% BSA as stabilizer. <b>Label:</b> FITC – Fluorescein Isothiocyanate Isomer 1</p>
<b>Applications:</b>	<p><b>Flow Cytometry:</b> The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity fc receptors. This Clone antibody (FITC conjugated) is reported to work on <b>Immunohistochemistry on</b></p>

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**Frozen Sections.**

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:**

This antibody reacts with TCR gamma/delta expressing lymphocytes. Clone GL3 has been shown to have depleting activity in vivo.

**Species:** Mouse.

Other species not tested.

**Storage:**

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

**General References:**

1. Skarstein, K. et al. (1994) Oligoclonality of T cells in salivary glands of autoimmune MRL/lpr mice. *Immunology* 81: 497-501.
2. Van der Heyde, H. C. et al. (1995) Gamma/delta T cells function in cell mediated immunity to acute bloodstage plasmodium chabaudi adami Malaria. *J. Immunol.* 154: 3985 - 3990.
3. Skeen, M. J. and Ziegler, H.K. (1993) Induction of murine peritoneal gamma/delta T cells and their role in resistance to bacterial infection. *J. Exp. Med.* 178: 971-984.

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