SM3015F

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Monoclonal Antibody to CD25 / IL2RA - FITC

Alternate names: IL-2 receptor alpha subunit, IL-2-RA, IL2-RA, Interleukin-2 receptor alpha chain, TAC antigen, p55

Catalog No.: SM3015F

Quantity: 100 Tests

Background: CD25 (IL2Ralpha, Tac) is a ligand-binding alpha subunit of interleukin 2 receptor (IL2R). Together with beta and gamma subunit CD25 constitues the high affinity IL2R, whereas CD25 alone serves as the low affinity IL2R. CD25 expression rapidly increases upon T cell activation. The 55 kDa CD25 molecule is enzymatically cleaved and shed from the cell surface as a soluble 45 kDa s-Tac, whose concentration in serum can be used as a marker of T cell activation. Expression of CD25 indicates the neoplastic phenotype of mast cells. Humanized anti CD25 antibodies represent a useful tool to reduce the incidence of allograft rejection as well as the severity of graft versus host reaction, and radioimmunoconjugates of anti-CD25 antibodies can be used against CD25 expressing lymphomas.

Uniprot ID: P01589

NCBI: NP_000408.1

GeneID: 3559

Host / Isotype: Mouse / IgG1

Clone: MEM-181

Immunogen: PHA-activated peripheral blood leucocytes

Format:
State: Liquid purified Ig fraction
Buffer System: phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
Label: FITC – Conjugated with Fluorescein isothiocyanate under optimum conditions. The reagent is free of unconjugated

Applications: Flow Cytometry (use 20 µl to label 10e6 cells or 100 µl whole blood).
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

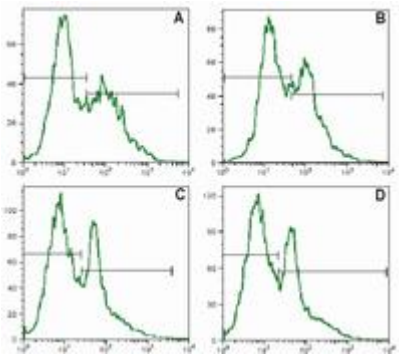
Specificity: The antibody reacts with CD25 (Interleukin-2 receptor a chain), a 55 kDa type I transmembrane glycoprotein expressed on activated B and T lymphocytes, activated monocytes/macrophages and on CD4+ T lymphocytes (T regulatory cells); it is lost on resting B and T lymphocytes.
Species: Human.
Other species not tested.

Storage: Store the antibody undiluted at 4-8°C for one month or at -20°C for longer. Avoid repeated freezing and thawing. This product is photosensitive and should be protected from light. Should it contain a precipitate we recommend microcentrifugation before use. Shelf life: one year from despatch.

General References:

1. Lai KN, Leung JC, Lai FM: Soluble interleukin 2 receptor release, interleukin 2 production, and interleukin 2 receptor expression in activated T-lymphocytes in vitro. Pathology. 1991 Jul;23(3):224-8.
2. Scheibenbogen C, Keilholz U, Richter M, Andreesen R, Hunstein W: The interleukin-2 receptor in human monocytes and macrophages: regulation of expression and release of the alpha and beta chains (p55 and p75). Res Immunol. 1992 Jan;143(1):33-7.
3. Morris JC, Waldmann TA: Advances in interleukin 2 receptor targeted treatment. Ann Rheum Dis. 2000 Nov;59 Suppl 1:i109-14.
4. Sotlar K, Horny HP, Simonitsch I, Krokowski M, Aichberger KJ, Mayerhofer M, Printz D, Fritsch G, Valent P: CD25 indicates the neoplastic phenotype of mast cells: a novel immunohistochemical marker for the diagnosis of systemic mastocytosis (SM) in routinely processed bone marrow biopsy specimens. Am J Surg Pathol. 2004 Oct;28(10):1319-25.
5. Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
6. Drbal K, Moertelmaier M, Holzhauser C, Muhammad A, Fuertbauer E, Howorka S, Hinterberger M, Stockinger H, Schütz GJ: Single-molecule microscopy reveals heterogeneous dynamics of lipid raft components upon TCR engagement. Int Immunol. 2007 May;19(5):675-84.

Pictures:



Surface staining of human PBMC with anti-human CD25 (MEM-181) FITC. The mononuclear cells were isolated from human peripheral blood, devided in aliquots for duplicate analysis and stimulated with PHA for 2 days. Panel A, C: staining with the anti-human CD25 (MEM-181). Panel B, D: staining with the standard anti-CD25 monoclonal antibody