Background:
IL2Rα (interleukin 2 receptor α), also known as CD25 and TAC antigen, is a single-pass type I transmembrane glycoprotein of the IL2R family. IL2Rα lacks structural features characteristic of members of the cytokine receptor superfamily. It contains 2 Sushi (CCP/SCR) domains in the extracellular region. IL2Rα is expressed on activated T cells and regulatory T cells. It is capable of binding IL2 with low affinity by itself. The heterodimer of IL2Rα and IL2Rβ together with the common γ chain IL2Rγ constitute the high-affinity IL2 receptor that transduces IL2 signals, leading to the activation of the intracellular signal pathways including MAPK, PI3K and JAK/STAT. The IL2R complex therefore regulates T cell proliferation, activation and other lymphoid functions. A soluble form of IL2Rα (IL2sRα) appears in human serum. However, the function of IL2sRα is unclear. Increased levels of IL2sRα in biological fluids reportedly correlate with increased T and B cell activation and immune system activation. Increased serum levels of IL-2 sRα have been observed in patients with a variety of inflammatory conditions and in the course of some leukemias and lymphomas. Mutations in this gene are associated with immunodeficiency due to IL2Rα/CD25 deficiency. The IL2Rα gene variations are also associated with diseases susceptibility of insulin-dependent diabetes mellitus.

References:

Construct Detail: The recombinant human CD25-Fc fusion is expressed as a 457 amino acid protein consisting of Glu22 - Gln240 region of CD25 (Uniprot Accession #P01589) and a C-terminal Fc from human IgG1, which exists as a dimer under non-reducing conditions.

Source: Human cells stably expressing CD25-Fc fusion and growing in chemical-defined media with no animal component or antibiotics.

M.W.: Calculated molecular mass 51.5 kDa; estimated by SDS-PAGE under reducing condition 65-75 kDa probably due to glycosylation. Calculated extinction coefficients (M-1 cm-1, at 280nm): 64830.

Purity: >95% judged by SDS-PAGE under reducing condition (see the gel image inserted).

Formulation: Supplied at 0.5 mg/ml in sterile PBS pH7.4 (concentration determined by UV spectrometry and verified by SDS-PAGE and Coomassie blue staining).

Endotoxin: <0.1 EU per 1 µg of purified recombinant protein determined by the LAL method.

Bioactivity: Binds IL2 and blocks IL2-mediated signaling activities, including IL-2-dependent proliferation of human megakaryocytic leukemic cells with a typical ED50 of 0.08-0.43 µg/mL.

Storage: The product is shipped at 4°C for immediate use or with dry ice in frozen. Upon receipt, centrifuge the vial briefly before opening. Store at ~20°C or lower and the product is stable for 6 months. Avoid repeated freeze-thaw cycles.

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