9853 Pacific Heights Blvd.
Suite D. San Diego,
CA 92121, USA
Tel: 858-263-4982
Email: info@abeomics.com

32-190052: IL-2 Superkine (untagged) [IL-2 (human) (Recombinant) (untagged)](Discontinued)

Application :	Functional Assay
Reactivity :	Human, Mouse
Alternative Name :	IL-2 Superkine (human) (untagged) (rec.); Interleukin-2; T Cell Growth Factor; TCGF; Aldesleukin; Super-2

Description

Source :HEK 293 cells
Specific Binds to human and mouse IL-2R.Interleukin-2 (IL-2) is a 133 amino acid glycoprotein with one intramolecular disulfide bond and variable glycosylation. It is secreted by activated T cells and induces proliferation and maturation of activated T cells, natural killer cells and lymphokine activated killer cells. IL-2 also stimulates proliferation of antibody-producing B cells, activates neutrophils and induces mononuclear cells to secrete IFN-gamma and TNF-alpha and -beta. Moreover, studies have shown that IL-2 is required for activation-induced apoptosis, an important homeostatic mechanism in the immune system, which is involved in the maintenance of peripheral tolerance to self-antigens.
IL-2 promotes T cell proliferation and particularly naÃ¯ve T cells. IL-2 signaling on activated T cells is effected through a quaternary high-affinity receptor complex consisting of IL-2, IL-2Ralpha (CD25), IL-2Rbeta and IL-2Rgamma. NaÃ¯ve T cells are relatively insensitive to IL-2 as they only express small amounts of IL-2Rbeta and IL-2Rgamma. They only acquire sensitivity after CD25 expression, which captures the cytokine and presents it to the IL-2Rbeta and IL-2Rgamma receptors. IL-2 Superkine is an artificial variant of IL-2 containing mutations at positions L80F / R81D / L85V / I86V / I92F. These mutations are located in the molecule's core that acts to stabilize the structure and to give it a receptor-binding conformation mimicking native IL-2 bound to CD25. These mutations effectively eliminate the functional requirement of IL-2 for CD25 expression and elicit proliferation of T cells. Compared to IL-2, the IL-2 Superkine induces superior expansion of cytotoxic T cells, leading to improved antitumour responses in vivo, and elicits proportionally less toxicity by lowering the expansion of T regulatory cells and reducing pulmonary oedema.

Product Info

Amount :	10 µg
Purification :	>=95% (SDS-PAGE)
Content :	Reconstitute with 100µl sterile water.0.1mg/ml after reconstitution. Lyophilized. Contains 50mM Tris pH8.0, 150mM NaCl, 0.02% CHAPS.
Storage condition :	Short Term Storage +4°C ; Long Term Storage-20°C ;After reconstitution, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles. PBS containing at least 0. 1% BSA should be used for further dilutions. Stable for at least 6 months after receipt when stored at -20°C.
Amino Acid :	The extracellular domain of human IL-2 (aa 21-153) (mutant H9 containing the mutations L80F / R81D / L85V / I86V / I92F) is untagged.

Application Note

MW :12kDa;
Biological Activity: Triggers T cell proliferation at concentration <1ng/ml in the presence of 250ng/mL each of anti-CD3 (ANC-144-020) and anti-CD28 (ANC-177-020) antibodies.
Endotoxin Content: <0.01EU/ÃÂµg protein (LAL test).Triggers far greater antitumor responses than native IL-2ÃÂ in vivoÃÂ but with lower toxicity.

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