

Human Cell Expressed IL-2 R beta-Fc^{HCX} Chimera Catalog # 4122H

Source	A DNA sequence encoding the signal peptide and extracellular domain of human Interleukin 2 receptor beta chain (aa 1-237) was fused to the Fc region of human IgG1 (aa 93-330). The chimeric protein was expressed in modified human 293 cells.
Molecular Mass	Symansis IL-2 R beta-Fc ^{HCX} Chimera migrates as a broad band between 65 and 85 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified IL-2 R beta-Fc which has a predicted molecular mass of 51.3 kDa.
pI	IL-2 R beta-Fc has a predicted pI of 7.6.
% Carbohydrate	Symansis IL-2 R beta-Fc ^{HCX} Chimera contains 20-40% carbohydrate by weight.
Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
Activity	IL-2 R beta-Fc ^{HCX} Chimera bound to protein A sepharose beads is able to pull down its ligand, IL-2.
Background Information	<p>Interleukin-2 (IL-2) is a pleiotropic glycoprotein that mediates the production of regulatory T cells and promotes T cell dependent tolerance. Additionally, IL-2 promotes the proliferation of antigen-activated T lymphocytes, facilitates the cytolytic activity of natural killer (NK) cells and stimulates anti-tumor activity in monocytes by inducing synthesis of GM-CSF, IL-1b and IL-6. IL-2 also promotes the proliferation of large granular lymphocytes and the growth and differentiation of mitogen activated B lymphocytes <i>in vitro</i>.</p> <p>The biological effects of IL-2 are mediated through the IL-2 receptor, which is predominantly expressed on activated T cells, B cells and monocytes. There are three subunits that may associate in different combinations to form the IL-2 receptor. These subunits include IL-2Ra, IL-2 R beta (IL-2Rb), which is shared with IL-15 receptor and IL-2Rg, which is also known as the common cytokine receptor gamma chain (gc) as it is shared with receptors for IL-4, IL-7, IL-9, IL-15 and IL-21.</p> <p>Different associations of these subunits form low affinity, intermediate affinity or high affinity IL-2 receptors. The low affinity receptor comprises the IL-2Ra glycopeptide, the intermediate affinity receptor is formed by the association of IL-2R beta and the gc while the high affinity receptor comprises IL-2 Ra, IL-2 Rb and gc chains.</p> <p>IL-2 R beta is expressed on resting T cells and is up regulated by T cell activation, particularly by treatment with IL2, anti-CD3 and anti CD28. The beta subunit is involved in both binding to IL2 and mediating signal activation.</p> <p>IL-2 R beta is a glycoprotein that contains 4 potential N-linked glycosylation sites.</p>

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Theoretical Sequence

AVNGTSQFTCFYNSRANISCVWSQDQALQDTSCQVHAWPDRRRWNQ
TCELLPVSQASWACNLILGAPDSQKLTTVDIVTLRVLCREGVRWRVMAI
QDFKPFENLRMAPISLQVVHVETHRCNISWEISQASHYFERHLEFEART
LSPGHTWEEAPLLTKQKQEWICLELTPDTQYEFQVRVKPLQGEFTTW
SPWSQPLAFRTKPAALGIPKVDKKVEPKSCDKTHTCPPCPAPPELLGGPS
VFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAK
TKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
KAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNG
QPENNYKTTTPVLDSGDSFFLYSKLTVDKSRWQQGNVDFCSVMHEALH
NHYTQKSLSLSPGK

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