

IL-6R α (2B2.3): sc-71366

BACKGROUND

IL-6 activates intracellular signaling through binding a receptor consisting of a ligand-binding protein (IL-6R α) and a second protein. IL-6 first binds to IL-6R α (also known as gp80), which subsequently associates with a gp130 dimer. The active signaling complex consists of, at minimum, IL-6, IL-6R α and a dimer of two gp130 proteins that are linked by a disulfide bond. A soluble form of IL-6R α , namely sIL-6R α , is generated by proteolytic cleavage of the membrane-bound precursor and can function as an agonistic molecule that can actively participate in cell-to-cell signaling. The second subunit of the IL-6 complex, gp130, also functions as a component of several additional receptor complexes, including leukemia inhibitory factor (LIF), oncostatin M (OSM), ciliary neurotrophic factor (CNTF) and IL-11. LIF binds to the LIF receptor with low affinity and to a complex of the LIF receptor and gp130 with high affinity, while OSM appears to bind to gp130 with low affinity and to a complex of gp130 and the LIF receptor with high affinity.

REFERENCES

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2. Taga, T., Hibi, M., Hirata, Y., Yamasaki, K., Yasukawa, K., Matsuda, T., Hirano, T. and Kishimoto, T. 1989. Interleukin-6 triggers the association of its receptor with a possible signal transducer, gp130. *Cell* 58: 573-581.
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4. Davis, S., Aldrich, T.H., Stahl, N., Pan, L., Taga, T., Kishimoto, T., Ip, N.Y. and Yancopoulos, G.D. 1993. LIFR β and gp130 as heterodimerizing signal transducers of the tripartite CNTF receptor. *Science* 260: 1805-1808.
5. Murakami, M., Hibi, M., Nakagawa, N., Nakagawa, T., Yasukawa, K., Yamanishi, K., Taga, T. and Kishimoto, T. 1993. IL-6-induced homodimerization of gp130 and associated activation of a tyrosine kinase. *Science* 260: 1808-1810.
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CHROMOSOMAL LOCATION

Genetic locus: IL6R (human) mapping to 1q21.3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

IL-6R α (2B2.3) is a mouse monoclonal antibody raised against CHO cells transfected with IL-6R α of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-6R α (2B2.3) is recommended for detection of IL-6R α by flow cytometry (1 μ g per 1 x 10⁶ cells).

Molecular Weight of IL-6R α : 80 kDa.

SELECT PRODUCT CITATIONS

1. Gopalakrishnan, S., Uma, S.K., Mohan, G., Mohan, A., Shanmugam, G., Kumar, V.T.V., J, S., Chandrika, S.K., Vasudevan, D., Nori, S.R.C., Sathi, S.N., George, S. and Maliekal, T.T. 2021. SSTP1, a host defense peptide, exploits the immunomodulatory IL6 pathway to induce apoptosis in cancer cells. *Front. Immunol.* 12: 740620.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **IL-6R α (H-7): sc-373708** for IL-6R α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.