SANTA CRUZ BIOTECHNOLOGY, INC.

IL-6Rα (M-20): sc-660

BACKGROUND

IL-6 activates intracellular signaling through binding a receptor consisting of a ligand-binding protein (IL-6Rα) and a second protein. IL-6 first binds to IL-6Rα (also known as gp80), which subsequently associates with a gp130 dimer. The active signaling complex consists of, at minimum, IL-6, IL-6Rα and a dimer of two gp130 proteins that are linked by a disulfide bond. A soluble form of IL-6Rα, namely sIL-6Rα, 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.

CHROMOSOMAL LOCATION

Genetic locus: Il6ra (mouse) mapping to 3 F1.

SOURCE

IL-6Rα (M-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IL-6Rα of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-660 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-6Rα (M-20) is recommended for detection of IL-6Rα of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-6Rα siRNA (m): sc-40065, IL-6Rα shRNA Plasmid (m): sc-40065-SH and IL-6Rα shRNA (m) Lentiviral Particles: sc-40065-V.

Molecular Weight of IL-6Rα: 80 kDa.

Positive Controls: M1 whole cell lysate: sc-364782.

STORAGE

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

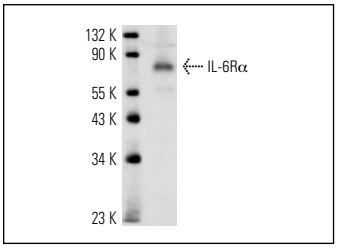
PROTOCOLS

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

RESEARCH USE

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

DATA



IL-6Rα (M-20): sc-660. Western blot analysis of IL-6Rα in M1 whole cell lysate.

SELECT PRODUCT CITATIONS

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4. Misiak-Tłoczek, A. and Brzezi ska-Błaszczyk, E. 2009. IL-6, but not IL-4, stimulates chemokinesis and TNF stimulates chemotaxis of tissue mast cells: involvement of both mitogen-activated protein kinases and phos-phatidylinositol 3-kinase signalling pathways. APMIS 117: 558-567.
5. Szabo-Fresnais, N., et al. 2010. A new regulation of IL-6 production in adult cardiomyocytes by β-adrenergic and IL-1 β receptors and induction of cellular hypertrophy by IL-6 *trans*-signalling. Cell. Signal. 22: 1143-1152.
6. Chentouf, M., et al. 2011. Excessive food intake, obesity and inflammation process in Zucker fa/fa rat pancreatic islets. PLoS ONE 6: e22954.
7. Schéle, E., et al. 2012. Interleukin-6 receptor α is co-localised with melanin-concentrating hormone in human and mouse hypothalamus. J. Neuroendocrinol. 24: 930-943.
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