SANTA CRUZ BIOTECHNOLOGY, INC.

LIFR (H-220): sc-20752

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

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

1. Yamasaki, K., et al. 1988. Cloning and expression of the human interleukin-6 (BSF-2/IFN β2) receptor. Science 241: 825-828.
2. Taga, T., et al. 1989. Interleukin-6 triggers the association of its receptor with a possible signal transducer, gp130. Cell 58: 573-581.
3. Hibi, M., et al. 1990. Molecular cloning and expression of an IL-6 signal transducer, gp130. Cell 63: 1149-1157.
4. Davis, S., et al. 1993. LIFRβ and gp130 as heterodimerizing signal transducers of the tripartide CNTF receptor. Science 260: 1805-1808.
5. Murakami, M., et al. 1993. Critical cytoplasmic region of the interleukin-6 signal transducer gp130 is conserved in the cytokine receptor family. Science 260: 1808-1810.
6. Müllberg, J., et al. 1994. The soluble human IL-6 receptor. Mutational characterization of the proteolytic cleavage site. J. Immunol. 152: 4958-4968.

CHROMOSOMAL LOCATION

Genetic locus: LIFR (human) mapping to 5p13.1; Lifr (mouse) mapping to 15 A1.

SOURCE

LIFR (H-220) is a rabbit polyclonal antibody raised against amino acids 878-1097 of LIFR of human origin.

PRODUCT

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

STORAGE

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

RESEARCH USE

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

APPLICATIONS

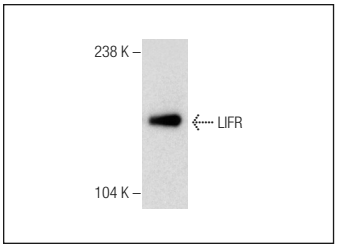
LIFR (H-220) is recommended for detection of LIFR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). LIFR (H-220) is also recommended for detection of LIFR in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LIFR siRNA (h): sc-35808, LIFR siRNA (m): sc-35809, LIFR shRNA Plasmid (h): sc-35808-SH, LIFR shRNA Plasmid (m): sc-35809-SH, LIFR shRNA (h) Lentiviral Particles: sc-35808-V and LIFR shRNA (m) Lentiviral Particles: sc-35809-V.

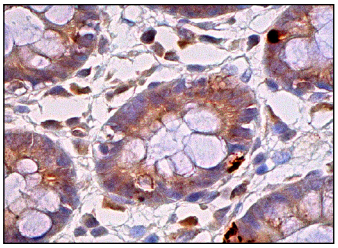
Molecular Weight of LIFR: 190 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or mouse skeletal muscle extract: sc-364250.

DATA



LIFR (H-220): sc-20752. Western blot analysis of LIFR expression in mouse skeletal muscle tissue extract.



LIFR (H-220): sc-20752. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Zeaiter, Z., et al. 2011. Helicobacter pylori induces expression and secretion of oncostatin M in macrophages *in vitro*. Dig. Dis. Sci. 56: 689-697.
2. Askvig, J.M., et al. 2012. Neuronal activity and axonal sprouting differentially regulate CNTF and CNTF receptor complex in the rat supraoptic nucleus. Exp. Neurol. 233: 243-252.

PROTOCOLS

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