SANTA CRUZ BIOTECHNOLOGY, INC.

OSMR β (C-20): sc-8496

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IL-6 activates intracellular signaling through binding a receptor consisting of an 80 kDa ligand-binding protein (IL-6R) and a second protein of 130 kDa. 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. OSM appears to bind to gp130 with low-affinity and to a complex of gp130 and the LIF receptor or the OSM 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.
7. Kishimoto, T., et al. 1994. Cytokine signal transduction. Cell 76: 253-262.
8. Kuropatwinski, K.K., et al. 1997. Influence of subunit combinations on signaling by receptors for oncostatin M, leukemia inhibitory factor, and interleukin-6. Biol. Chem. 272: 15135-15144.

CHROMOSOMAL LOCATION

Genetic locus: OSMR (human) mapping to 5p13.1.

SOURCE

OSMR β (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of OSMR β 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.

Blocking peptide available for competition studies, sc-8496 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OSMR β (C-20) is recommended for detection of OSMR β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 OSMR β siRNA (h): sc-40068, OSMR β shRNA Plasmid (h): sc-40068-SH and OSMR β shRNA (h) Lentiviral Particles: sc-40068-V.

Molecular Weight of OSMR β: 180 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Znoyko, I., et al. 2005. Expression of oncostatin M and its receptors in normal and cirrhotic human liver. J. Hepatol. 43: 893-900.
2. Yu, M., et al. 2008. Interleukin-6 cytokine family member Oncostatin M is a hair-follicle-expressed factor with hair growth inhibitory properties. Exp. Dermatol. 17: 12-19.
3. Yamashita, T., et al. 2010. Oncostatin m renders epithelial cell adhesion molecule-positive liver cancer stem cells sensitive to 5-Fluorouracil by inducing hepatocytic differentiation. Cancer Res. 70: 4687-4697.

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.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **OSMR β (D-10): sc-271695** or **OSMR β (AN-A2): sc-9992**, our highly recommended monoclonal alternatives to OSMR β (C-20).