SANTA CRUZ BIOTECHNOLOGY, INC.

# gp130 (AN-H2): sc-9994

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

IL-6 activates intracellular signaling through binding a receptor consisting of a 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 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: IL6ST (human) mapping to 5q11.2.

## SOURCE

gp130 (AN-H2) is a mouse monoclonal antibody raised against gp130 transfected Sf21 cells of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

gp130 (AN-H2) is available conjugated to agarose (sc-9994 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-9994 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9994 PE), fluorescein (sc-9994 FITC), Alexa Fluor® 488 (sc-9994 AF488), Alexa Fluor® 546 (sc-9994 AF546), Alexa Fluor® 594 (sc-9994 AF594) or Alexa Fluor® 647 (sc-9994 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-9994 AF680) or Alexa Fluor® 790 (sc-9994 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

gp130 (AN-H2) is recommended for detection of gp130 of human origin by 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), flow cytometry (1 µg per 1 x $10^6$ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for gp130 siRNA (h): sc-29333, gp130 shRNA Plasmid (h): sc-29333-SH and gp130 shRNA (h) Lentiviral Particles: sc-29333-V.

Molecular Weight of gp130: 130 kDa.

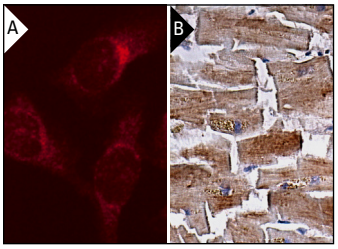
## STORAGE

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

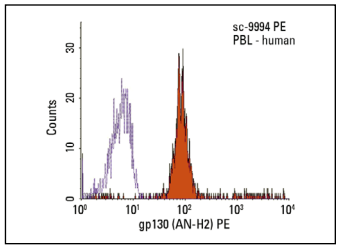
## RESEARCH USE

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

## DATA




gp130 (AN-H2): sc-9994. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes (**B**).




gp130 (AN-H2) PE: sc-9994 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse $IgG_1$-PE: sc-2866.

## SELECT PRODUCT CITATIONS


1. Maberley, D., et al. 2002. Expression of leptin and neuropilin in a case of idiopathic choroidal neovascularization. Can. J. Ophthalmol. 37: 295-300.
2. Buk, D.M., et al. 2005. Increased association with detergent-resistant membranes/lipid rafts of apically targeted mutants of the interleukin-6 receptor gp80. Eur. J. Cell Biol. 84: 819-831.
3. Doumanov, J.A., et al. 2006. Identification of a basolateral sorting signal within the cytoplasmic domain of the interleukin-6 signal transducer gp130. Cell. Signal. 18: 1140-1146.
4. Ho, Y.S., et al. 2009. *Porphyromonas gingivalis* fimbriae-dependent interleukin-6 autocrine regulation by increase of gp130 in endothelial cells. J. Periodontal Res. 44: 550-556.
5. Joshita, S., et al. 2010. A case of granulocyte-colony stimulating factor-producing hepatocellular carcinoma confirmed by immunohistochemistry. J. Korean Med. Sci. 25: 476-480.
6. Coward, J., et al. 2011. Interleukin-6 as a therapeutic target in human ovarian cancer. Clin. Cancer Res. 17: 6083-6096.
7. Diegelmann, J., et al. 2012. A novel role for interleukin-27 (IL-27) as mediator of intestinal epithelial barrier protection mediated via differential signal transducer and activator of transcription (Stat) protein signaling and induction of antibacterial and anti-inflammatory proteins. J. Biol. Chem. 287: 286-298.
8. Noda-Nicolau, N.M., et al. 2018. Polybacterial stimulation suggests discrete IL-6/IL-6R signaling in human fetal membranes: potential implications on IL-6 bioactivity. J. Reprod. Immunol. 126: 60-68.
9. Puligedda, R.D., et al. 2019. Capture and display of antibodies secreted by hybridoma cells enables fluorescent on-cell screening. MAbs 11: 546-558.


## PROTOCOLS

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