

p-gp130 (A-12): sc-377572

BACKGROUND

IL-6 activates intracellular signaling by binding to IL-6R (the IL-6 receptor), which subsequently associates with a second protein, known as gp130. 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. The second sub-unit 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. The major phosphorylation site of human gp130 is located immediately N-terminal to the di-leucine motif of gp130, which regulates the internalization of the receptor. Phosphorylation of this site, Ser 782, regulates cell surface expression of the receptor polypeptide.

REFERENCES

1. Yamasaki, K., et al. 1988. Cloning and expression of the human interleukin-6 (BSF-2/IFN β 2) 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. LIFR β and gp130 as heterodimerizing signal transducers of the tripartite 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.

CHROMOSOMAL LOCATION

Genetic locus: IL6ST (human) mapping to 5q11.2; Il6st (mouse) mapping to 13 D2.2.

SOURCE

p-gp130 (A-12) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 782 phosphorylated gp130 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-gp130 (A-12) is available conjugated to agarose (sc-377572 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377572 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377572 PE), fluorescein (sc-377572 FITC), Alexa Fluor[®] 488 (sc-377572 AF488), Alexa Fluor[®] 546 (sc-377572 AF546), Alexa Fluor[®] 594 (sc-377572 AF594) or Alexa Fluor[®] 647 (sc-377572 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377572 AF680) or Alexa Fluor[®] 790 (sc-377572 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377572 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

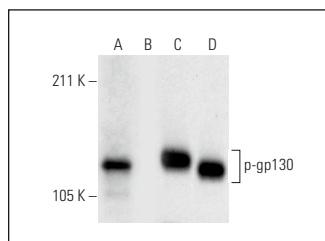
p-gp130 (A-12) is recommended for detection of Ser 782 phosphorylated gp130 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 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).

p-gp130 (A-12) is also recommended for detection of correspondingly phosphorylated gp130 in additional species, including equine.

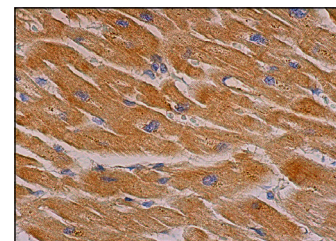
Suitable for use as control antibody for gp130 siRNA (h): sc-29333, gp130 siRNA (m): sc-35502, gp130 shRNA Plasmid (h): sc-29333-SH, gp130 shRNA Plasmid (m): sc-35502-SH, gp130 shRNA (h) Lentiviral Particles: sc-29333-V and gp130 shRNA (m) Lentiviral Particles: sc-35502-V.

Molecular Weight of p-gp130: 130 kDa.

DATA



Western blot analysis of gp130 phosphorylation in untreated (A, C) and lambda protein phosphatase (sc-200312A) treated (B, D) 3T3-L1 whole cell lysates. Antibodies tested include p-gp130 (A-12): sc-377572 (A, B) and gp130 (M-20): sc-656 (C, D).



p-gp130 (A-12): sc-377572. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Liu, F., et al. 2019. gp130 degradation induced by epirubicin contributes to chemotherapy efficacy. *Biochem. Biophys. Res. Commun.* 519: 572-578.
2. Soutto, M., et al. 2019. Activation of Stat3 signaling is mediated by TFF1 silencing in gastric neoplasia. *Nat. Commun.* 10: 3039.
3. Zhang, Z., et al. 2019. CEACAM1 regulates the IL-6 mediated fever response to LPS through the RP105 receptor in murine monocytes. *BMC Immunol.* 20: 7.
4. Park, S.A., et al. 2022. Inhibition of gp130/Stat3 and EMT by combined bazedoxifene and paclitaxel treatment in ovarian cancer. *Oncol. Rep.* 47: 52.

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.