SANTA CRUZ BIOTECHNOLOGY, INC.

IP Receptor (N-20): sc-20434

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cyclooxygenases metabolize arachidonate to five primary prostanoids: PGE2, PGF2α, PGI2, TXA2 and PGD2. These lipid mediators interact with specific members of G protein-coupled prostanoid receptors, designated EP, FP, IP, TP and DP, respectively. The IP Receptor binds prostacyclin, PGI2, the main prostanoid synthesized by vascular tissues. First discovered in 1976, prostacyclin is involved in platelet aggregation inhibition, vasodilatation and cytoprotection, and either prostacyclin or its analogs are used in the treatment of hypertension. Upon binding to the IP Receptor, prostacyclin activates adenylate cyclase primarily through the $G_{\alpha s}$ protein. The gene encoding the human IP Receptor is located on chromosome 19. It is expressed as a glycosylated and phosphorylated protein, which is abundantly expressed in vascular tissues such as aorta, lung, atrium and ventricle, as well as in kidney, thymus, spleen and neurons.

REFERENCES

1. Botting, R., et al. 1989. Vasoactive mediators derived from the endothelium. Arch. Mal. Coeur Vaiss. 82: 11-14.
2. Grant, S.M., et al. 1992. Iloprost. A review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in peripheral vascular disease, myocardial ischaemia and extracorporeal circulation procedures. Drugs 43: 889-924.
3. Nakagawa, O., et al. 1994. Molecular cloning of human prostacyclin receptor cDNA and its gene expression in the cardiovascular system. Circulation 90: 1643-1647.
4. Vane, J.R., et al. 1995. Pharmacodynamic profile of prostacyclin. Am. J. Cardiol. 75: 3-10.
5. Ogawa, Y., et al. 1995. Structural organization and chromosomal assignment of the human prostacyclin receptor gene. Genomics 27: 142-148.
6. Oida, H., et al. 1995. *In situ* hybridization studies of prostacyclin receptor mRNA expression in various mouse organs. Br. J. Pharmacol. 116: 2828-2837.
7. Smyth, E.M., et al. 1996. Agonist-dependent phosphorylation of an epitope-tagged human prostacyclin receptor. J. Biol. Chem. 271: 33698-33704.

CHROMOSOMAL LOCATION

Genetic locus: PTGIR (human) mapping to 19q13.32.

SOURCE

IP Receptor (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of IP Receptor 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-20434 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IP Receptor (N-20) is recommended for detection of IP Receptor of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

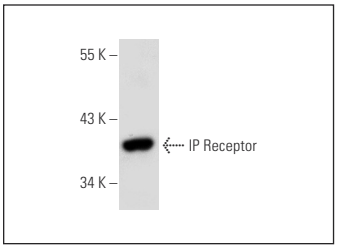
IP Receptor (N-20) is also recommended for detection of IP Receptor in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for IP Receptor siRNA (h): sc-40175, IP Receptor shRNA Plasmid (h): sc-40175-SH and IP Receptor shRNA (h) Lentiviral Particles: sc-40175-V.

Molecular Weight of IP Receptor: 42 kDa.

Positive Controls: A549 cell lysate: sc-2413.

DATA



IP Receptor (N-20): sc-20434. Western blot analysis of IP Receptor expression in mouse heart tissue extract.

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.