SANTA CRUZ BIOTECHNOLOGY, INC.

IL-1RI (C-20): sc-687

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Three structurally related ligands for IL-1Rs have been described. These include two agonists, IL-1α and IL-1β, and a specific receptor antagonist, IL-1Rα. Among the activities regulated by IL-1 are fever, acute phase responses, degradation of connective tissue and immunostimulatory activities. The IL-1Rα molecule also binds specifically to IL-1Rs, but fails to initiate intracellular responses. Two distinct IL-1Rs have been identified, each of which belongs to the Ig superfamily and is widely expressed in a broad range of cells and tissues. Although many cell types co-express type I and type II receptors, there is no evidence that these constitute subunits of a single complex. The type II receptor has a short 29 amino acid cytoplasmic domain that does not seem sufficient for signaling, while in fact there is considerable evidence arguing that IL-1 signals exclusively through the type I IL-1R.

REFERENCES

1. Sims, J.E., et al. 1989. Cloning of the interleukin-1 receptor from human T cells. Proc. Natl. Acad. Sci. USA 86: 8946-8950.
2. McMahan, C.J., et al. 1991. A novel IL-1 receptor, cloned from B cells by mammalian expression, is expressed in many cell types. EMBO J. 10: 2821-2832.

CHROMOSOMAL LOCATION

Genetic locus: IL1R1 (human) mapping to 2q12.1.

SOURCE

IL-1RI (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IL-1RI 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-687 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

IL-1RI (C-20) is recommended for detection of IL-1RI 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).

Suitable for use as control antibody for IL-1RI siRNA (h): sc-35651, IL-1RI shRNA Plasmid (h): sc-35651-SH and IL-1RI shRNA (h) Lentiviral Particles: sc-35651-V.

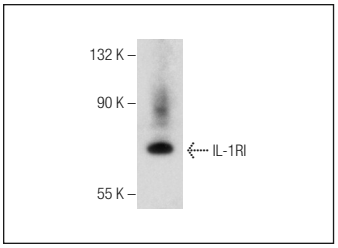
Molecular Weight of IL-1RI: 80 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IL-1RI (C-20): sc-687. Western blot analysis of IL-1RI expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Marmiroli, S., et al. 1998. Phosphatidylinositol 3-kinase is recruited to a specific site in the activated IL-1 receptor I. FEBS Lett. 438: 49-54.
2. Sawai, H., et al. 2003. Expression and prognostic roles of integrins and interleukin-1 receptor type I in patients with ductal adenocarcinoma of the pancreas. Dig. Dis. Sci. 48: 1241-1250.
3. Bornstein, S.R., et al. 2004. Impaired adrenal stress response in Toll-like receptor 2-deficient mice. Proc. Natl. Acad. Sci. USA 47: 16695-16700.
4. Sawai, H., et al. 2004. Immunohistochemical analysis of molecular biological factors in intraductal papillary-mucinous tumors and mucinous cystic tumors of the pancreas. Scand. J. Gastroenterol. 39: 1159-1165.
5. Trebec-Reynolds, D.P., et al. 2010. IL-1α and IL-1β have different effects on formation and activity of large osteoclasts. J. Cell. Biochem. 109: 975-982.

STORAGE

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