SANTA CRUZ BIOTECHNOLOGY, INC.

IL-1RI (N-20): sc-688

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 coexpress 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.

CHROMOSOMAL LOCATION

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

SOURCE

IL-1RI (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-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-688 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-1RI (N-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), 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).

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.

STORAGE

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

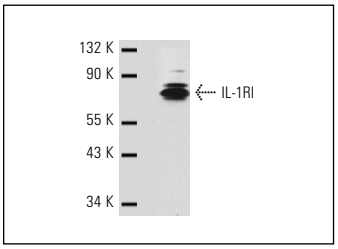
PROTOCOLS

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

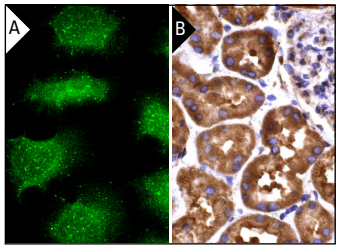
RESEARCH USE

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

DATA



IL-1RI (N-20): sc-688. Western blot analysis of IL-1RI expression in CCRF-CEM whole cell lysate.



IL-1RI (N-20): sc-688. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Reddy, S.A., et al. 1997. Phosphatidylinositol 3-kinase in Interleukin 1 signaling. Physical interaction with the Interleukin 1 receptor and requirement in NFκB and AP-1 activation. J. Biol. Chem. 272: 29167-29173.
2. Manna, S.K., et al. 2005. Interleukin-8 induces nuclear transcription factor-κB through a TRAF6-dependent pathway. J. Biol. Chem. 280: 7010-7021.
3. Dubois, S.P., et al. 2005. Survival adjustment of mature dendritic cells by IL-15. Proc. Natl. Acad. Sci. USA 102: 8622-8627.
4. Hassanain, M., et al. 2005. Potentiating role of interleukin-1β (IL-1β) and IL-1β type 1 receptors in the medial hypothalamus in defensive rage behavior in the cat. Brain Res. 1048: 1-11.
5. Lu, T., et al. 2007. Dose-dependent cross-talk between the transforming growth factor-β and interleukin-1 signaling pathways. Proc. Natl. Acad. Sci. USA 104: 4365-4370.
6. Nuñez, C., et al. 2008. TNF/IL-1/NIK/NFκB transduction pathway: a comparative study in normal and pathological human prostate (benign hyperplasia and carcinoma). Histopathology 53: 166-176.
7. Bouraoui, Y., et al. 2008. Pro-inflammatory cytokines and prostate-specific antigen in hyperplasia and human prostate cancer. Cancer Detect. Prev. 32: 23-32.
8. Leung, K.W., et al. 2009. Bacterial endotoxin activates retinal pigment epithelial cells and induces their degeneration through IL-6 and IL-8 autocrine signaling. Mol. Immunol. 46: 1374-1386.