

IL-1RI (H-8): sc-393998

BACKGROUND

Three structurally related ligands for IL-1Rs have been described. These include two agonists, IL-1 α and IL-1 β , and a specific receptor antagonist, IL-1R α . Among the activities regulated by IL-1 are fever, acute phase responses, degradation of connective tissue and immunostimulatory activities. The IL-1R α 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; IL1r1 (mouse) mapping to 1 B.

SOURCE

IL-1RI (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 539-563 at the C-terminus of IL-1RI of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG γ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-1RI (H-8) is available conjugated to agarose (sc-393998 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393998 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393998 PE), fluorescein (sc-393998 FITC), Alexa Fluor[®] 488 (sc-393998 AF488), Alexa Fluor[®] 546 (sc-393998 AF546), Alexa Fluor[®] 594 (sc-393998 AF594) or Alexa Fluor[®] 647 (sc-393998 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393998 AF680) or Alexa Fluor[®] 790 (sc-393998 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393998 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

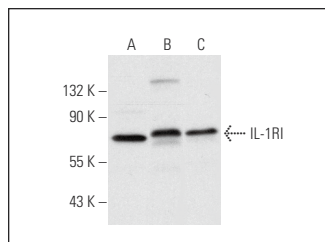
IL-1RI (H-8) is recommended for detection of IL-1RI of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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 siRNA (m): sc-35652, IL-1RI shRNA Plasmid (h): sc-35651-SH, IL-1RI shRNA Plasmid (m): sc-35652-SH, IL-1RI shRNA (h) Lentiviral Particles: sc-35651-V and IL-1RI shRNA (m) Lentiviral Particles: sc-35652-V.

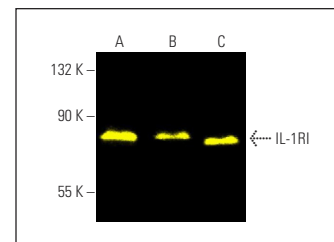
Molecular Weight of IL-1RI: 80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, RAW 264.7 whole cell lysate: sc-2211 or CCRF-CEM cell lysate: sc-2225.

DATA



IL-1RI (H-8): sc-393998. Western blot analysis of IL-1RI expression in RAW 264.7 (A), CCRF-CEM (B) and HeLa (C) whole cell lysates.



IL-1RI (H-8) Alexa Fluor[®] 488: sc-393998 AF488. Direct fluorescent western blot analysis of IL-1RI expression in CCRF-CEM (A), HeLa (B) and NIH/3T3 (C) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Colombo, E., et al. 2014. Fingolimod may support neuroprotection via blockade of astrocyte nitric oxide. *Ann. Neurol.* 76: 325-337.
2. Heun, Y., et al. 2019. Inactivation of the tyrosine phosphatase SHP-2 drives vascular dysfunction in sepsis. *EBioMedicine* 42: 120-132.
3. Wei, C., et al. 2020. The NLRP3 inflammasome regulates corneal allograft rejection through enhanced phosphorylation of STAT3. *Am. J. Transplant.* 20: 3354-3366.
4. Megli, C., et al. 2021. Inflammasome signaling in human placental trophoblasts regulates immune defense against *Listeria monocytogenes* infection. *J. Exp. Med.* 218: e20200649.
5. Vaka, R., et al. 2022. Direct comparison of different therapeutic cell types susceptibility to inflammatory cytokines associated with COVID-19 acute lung injury. *Stem Cell Res. Ther.* 13: 20.
6. Wen, X., et al. 2023. Cumulus cells accelerate postovulatory oocyte aging through IL1-IL1R1 interaction in mice. *Int. J. Mol. Sci.* 24: 3530.

RESEARCH USE

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