

IL-1RII (G-5): sc-376247

BACKGROUND

Decoy receptors are structurally incapable of activating signaling pathways, but act as anti-inflammatory agents by sequestering agonists for actual signaling complexes. The type II IL-1 receptor (IL-1RII) acts as a decoy receptor for the chemokine interleukin-1 (IL-1). Additionally, the soluble form of IL-1R accessory protein (IL-1R AcP) increases the affinity of binding of IL-1 α and IL-1 β to IL-1RII 100-fold, but does not increase the affinity for another anti-inflammatory agent, IL-1R antagonist (IL-1Ra). The end result is a complex regulatory mechanism for IL-1 activated inflammation, whereby dexamethasone and other molecules inducing IL-1RII, function in an immunosuppressive and anti-inflammatory manner.

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.
3. Dower, S.K., et al. 1992. The interleukin-1 system: receptors, ligands and signals. *Chem. Immunol.* 51: 33-64.
4. Slack, J., et al. 1993. Independent binding of interleukin-1 α and interleukin-1 β to type I and type II IL-1 receptors. *J. Biol. Chem.* 268: 2513-2524.
5. Sims, J.E., et al. 1993. Interleukin 1 signaling occurs exclusively via the type I receptor. *Proc. Natl. Acad. Sci. USA* 90: 6155-6159.

CHROMOSOMAL LOCATION

Genetic locus: IL1R2 (human) mapping to 2q11.2.

SOURCE

IL-1RII (G-5) is a mouse monoclonal antibody raised against amino acids 257-327 mapping near the C-terminus of IL-1RII of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-1RII (G-5) is available conjugated to agarose (sc-376247 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376247 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376247 PE), fluorescein (sc-376247 FITC), Alexa Fluor[®] 488 (sc-376247 AF488), Alexa Fluor[®] 546 (sc-376247 AF546), Alexa Fluor[®] 594 (sc-376247 AF594) or Alexa Fluor[®] 647 (sc-376247 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376247 AF680) or Alexa Fluor[®] 790 (sc-376247 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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-1RII (G-5) is recommended for detection of IL-1RII of 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-1RII siRNA (h): sc-72042, IL-1RII shRNA Plasmid (h): sc-72042-SH and IL-1RII shRNA (h) Lentiviral Particles: sc-72042-V.

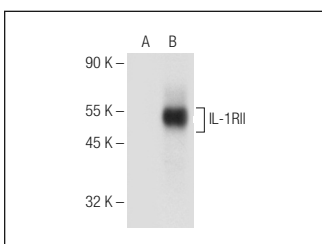
Molecular Weight of IL-1RII: 46 kDa.

Positive Controls: IL-1RII (h): 293T Lysate: sc-115519.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



IL-1RII (G-5): sc-376247. Western blot analysis of IL-1RII expression in non-transfected: sc-117752 (A) and human IL-1RII transfected: sc-115519 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Martínez-Reza, I., et al. 2019. Calcitriol inhibits the proliferation of triple-negative breast cancer cells through a mechanism involving the proinflammatory cytokines IL-1 β and TNF- α . *J. Immunol. Res.* 2019: 6384278.
2. Li, M., et al. 2021. Pathological matrix stiffness promotes cardiac fibroblast differentiation through the POU2F1 signaling pathway. *Sci. China Life Sci.* 64: 242-254.

RESEARCH USE

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