SANTA CRUZ BIOTECHNOLOGY, INC.

SIGIRR (G-8): sc-515818

BACKGROUND

Single Ig IL-1-related receptor SIGIRR, also designated single immunoglobulin domain-containing IL-1R-related protein or Toll/interleukin-1 receptor 8 (TIR8), is a member of the interleukin-1 receptor family. SIGIRR acts as a negative regulator of the IL-1R and Toll-like receptor signaling pathways and reduces the recruitment of certain components to the TLR4 receptor. Subsequently, SIGIRR confers resistance to *P. aeruginosa* corneal infection. SIGIRR can form complexes with IL-1R1, MYD-88, IRAK-1 and TRAF-6 upon IL-1 stimulation and TLR4 after LPS stimulation. It is a single-pass type III membrane protein that is mainly expressed in kidney, lung and gut.

REFERENCES

1. Thomassen, E., et al. 1999. Identification and characterization of SIGIRR, a molecule representing a novel subtype of the IL-1R superfamily. Cytokine 11: 389-399.
2. Wald, D., et al. 2003. SIGIRR, a negative regulator of Toll-like receptor-interleukin 1 receptor signaling. Nat. Immunol. 4: 920-927.
3. Mantovani, A., et al. 2004. Extracellular and intracellular decoys in the tuning of inflammatory cytokines and Toll-like receptors: the new entry TIR8/SIGIRR. J. Leukoc. Biol. 75: 738-742.
4. Polentarutti, N., et al. 2004. Unique pattern of expression and inhibition of IL-1 signaling by the IL-1 receptor family member TIR8/SIGIRR. Eur. Cytokine Netw. 14: 211-218.
5. Qin, J., et al. 2005. SIGIRR inhibits interleukin-1 receptor- and Toll-like receptor 4-mediated signaling through different mechanisms. J. Biol. Chem. 280: 25233-25241.
6. Adib-Conquy, M., et al. 2006. Up-regulation of MyD88s and SIGIRR, molecules inhibiting Toll-like receptor signaling, in monocytes from septic patients. Crit. Care Med. 34: 2377-2385.
7. Huang, X., et al. 2006. SIGIRR promotes resistance against *Pseudomonas aeruginosa* keratitis by down-regulating type-1 immunity and IL-1R1 and TLR4 signaling. J. Immunol. 177: 548-556.

CHROMOSOMAL LOCATION

Genetic locus: SIGIRR (human) mapping to 11p15.5; Sigirr (mouse) mapping to 7 F5.

SOURCE

SIGIRR (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 4-21 at the N-terminus of SIGIRR of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SIGIRR (G-8) is recommended for detection of SIGIRR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 SIGIRR siRNA (h): sc-61547, SIGIRR siRNA (m): sc-61548, SIGIRR shRNA Plasmid (h): sc-61547-SH, SIGIRR shRNA Plasmid (m): sc-61548-SH, SIGIRR shRNA (h) Lentiviral Particles: sc-61547-V and SIGIRR shRNA (m) Lentiviral Particles: sc-61548-V.

Molecular Weight of unglycosylated SIGIRR: 46/55 kDa.

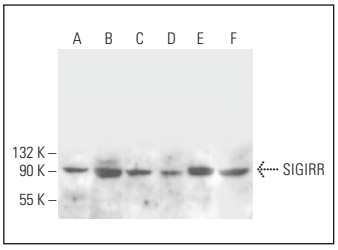
Molecular Weight of glycosylated SIGIRR: 65-90 kDa.

Positive Controls: SIGIRR (h): 293T Lysate: sc-111731, CCRF-CEM cell lysate: sc-2225 or Jurkat whole cell lysate: sc-2204.

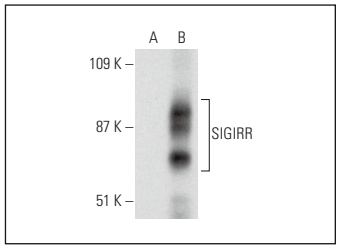
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



SIGIRR (G-8): sc-515818. Western blot analysis of SIGIRR expression in PANC-1 (**A**), CCRF-CEM (**B**), Caki-1 (**C**), A549 (**D**), Jurkat (**E**) and KNRK (**F**) whole cell lysates.



SIGIRR (G-8): sc-515818. Western blot analysis of SIGIRR expression in non-transfected: sc-117752 (**A**) and human SIGIRR transfected: sc-111731 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tang, R., et al. 2019. Interleukin-37 inhibits osteoclastogenesis and alleviates inflammatory bone destruction. J. Cell. Physiol. 234: 7645-7658.

RESEARCH USE

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