

# SIGIRR (A-4): sc-271864

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

SIGIRR (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 377-394 at the C-terminus of SIGIRR of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SIGIRR (A-4) is available conjugated to agarose (sc-271864 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271864 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271864 PE), fluorescein (sc-271864 FITC), Alexa Fluor® 488 (sc-271864 AF488), Alexa Fluor® 546 (sc-271864 AF546), Alexa Fluor® 594 (sc-271864 AF594) or Alexa Fluor® 647 (sc-271864 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271864 AF680) or Alexa Fluor® 790 (sc-271864 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271864 P, (100 µg 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

SIGIRR (A-4) 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).

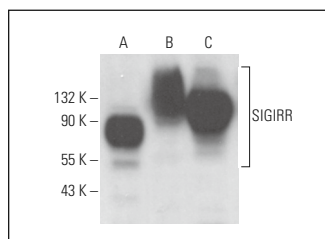
Suitable for use as control antibody for SIGIRR siRNA (h): sc-61547, SIGIRR siRNA (m): sc-61548, SIGIRR shRNA Plasmid (h): sc-61547-SH, SIGIRR shRNA Plasmid (m): sc-61548-SH, SIGIRR shRNA (h) Lentiviral Particles: sc-61547-V and SIGIRR shRNA (m) Lentiviral Particles: sc-61548-V.

Molecular Weight of unglycosylated SIGIRR: 46/55 kDa.

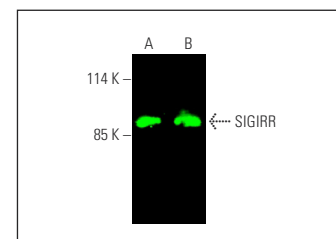
Molecular Weight of glycosylated SIGIRR: 65-90 kDa.

Positive Controls: F9 cell lysate: sc-2245, c4 whole cell lysate: sc-364186 or COLO 205 whole cell lysate: sc-364177.

## DATA



SIGIRR (A-4): sc-271864. Western blot analysis of SIGIRR expression in COLO 205 (A), F9 (B) and c4 (C) whole cell lysates.



SIGIRR (A-4): sc-271864. Near-Infrared western blot analysis of SIGIRR expression in F9 (A) and c4 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ-BP-CFL 680: sc-516180.

## SELECT PRODUCT CITATIONS

1. Cho, S.X., et al. 2020. Characterization of the pathoimmunology of necrotizing enterocolitis reveals novel therapeutic opportunities. *Nat. Commun.* 11: 5794.
2. Mantione, M.E., et al. 2022. SIGIRR downregulation and interleukin-1 signaling intrinsic to renal cell carcinoma. *Front. Oncol.* 12: 894413.
3. Castagnino, P., et al. 2022. Systematic analysis of IL-1 cytokine signaling suppression by HPV16 oncoproteins. *J. Virol.* 96: e0132622.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.