

# SIMPL (N-12): sc-169314

## BACKGROUND

SIMPL, also known as IRAK1BP1 (interleukin-1 receptor-associated kinase 1-binding protein 1), is a 260 amino acid protein belonging to the IRAK1BP1 family. In addition to containing an intrinsically disordered region which associates with HSPA1 and HSPA8, SIMPL also interacts directly with IRAK1 and promotes RELA transcriptional activity. SIMPL is a major component of the IRAK1-dependent TNFRSF1A signaling pathway in which TNF $\alpha$  induces NF $\kappa$ B gene transcription, leading to an inhibition of proinflammatory cytokines. Inactivation of SIMPL inhibits tumor necrosis factor receptor type I-induced NF $\kappa$ B activity. Localizing to the nucleus and cytoplasm, SIMPL requires the phosphorylation of Ser 56 and/or Ser 62 to be fully active.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: IRAK1BP1 (human) mapping to 6q14.1; Irak1bp1 (mouse) mapping to 9 E2.

## SOURCE

SIMPL (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SIMPL of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169314 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SIMPL (N-12) is recommended for detection of SIMPL of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with SIMP .

Suitable for use as control antibody for SIMPL siRNA (h): sc-95101, SIMPL siRNA (m): sc-153469, SIMPL shRNA Plasmid (h): sc-95101-SH, SIMPL shRNA Plasmid (m): sc-153469-SH, SIMPL shRNA (h) Lentiviral Particles: sc-95101-V and SIMPL shRNA (m) Lentiviral Particles: sc-153469-V.

Molecular Weight of SIMPL: 29 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## STORAGE

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

## 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) or our catalog for detailed protocols and support products.