

# CARD 12 (N-20): sc-49396

## BACKGROUND

Membrane-associated guanylate kinase (MAGUK) family members localize to the plasma membrane and function as molecular scaffolds for the assembly of multi-protein complexes. The MAGUK family includes several mammalian proteins related to the *Drosophila* tumor suppressor discs-large (dlg) gene product, such as postsynaptic proteins, GKAPs, the tight junction associated proteins (ZO-1-3) and the caspase-associated recruitment domain (CARD) proteins, CARD 6, CARD 8-12 and CARD 14. CARD 12 is expressed at high levels in bone marrow, and expressed at lower levels in lymph node, placenta, spleen and brain tissues. CARD 12 regulates the activation of caspase-1, a caspase that plays a role in both apoptotic signaling and cytokine processing. The nucleotide-binding site domain of CARD 12 is specific for ATP/dATP. CARD 12 associates with itself and with ASC, an associated speck-like protein containing a CARD, recently identified as a proapoptotic protein. Together, they induce apoptosis and inflammatory signaling pathways.

## REFERENCES

- Geddes, B.J., et al. 2001. Human CARD 12 is a novel CED4/Apaf-1 family member that induces apoptosis. *Biochem. Biophys. Res. Commun.* 284: 77-82.
- Damiano, J.S., et al. 2004. Multiple roles of CLAN (caspase-associated recruitment domain, leucine-rich repeat, and NAIP CIIA HET-E, and TP1-containing protein) in the mammalian innate immune response. *J. Immunol.* 173: 6338-6345.
- Gutierrez, O., et al. 2004. Ipaf is upregulated by tumor necrosis factor  $\alpha$  in human leukemia cells. *FEBS Lett.* 568: 79-82.
- Wang, Y., et al. 2004. PYNOD, a novel Apaf-1/CED4-like protein is an inhibitor of ASC and caspase-1. *Int. Immunol.* 16: 777-786.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606831. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: CARD12 (human) mapping to 2p22-p21; Card12 (mouse) mapping to 17 E2.

## SOURCE

CARD 12 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CARD 12 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-49396 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

CARD 12 (N-20) is recommended for detection of CARD 12 isoforms CLAN A, B, C and D of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

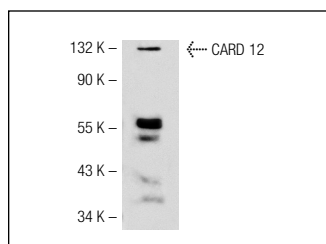
Suitable for use as control antibody for CARD 12 siRNA (h): sc-60328, CARD 12 shRNA Plasmid (h): sc-60328-SH and CARD 12 shRNA (h) Lentiviral Particles: sc-60328-V.

Molecular Weight of CARD 12: 116 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



CARD 12 (N-20): sc-49396. Western blot analysis of CARD 12 expression in IMR-32 whole cell lysate.

## 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.

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Try **CARD 12 (F-3): sc-514658**, our highly recommended monoclonal alternative to CARD 12 (N-20).