

# CARD 14 (C-20): sc-49397

## 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 14 is a 1,004 amino acid protein consisting of an N-terminal CARD domain, a central coiled-coil domain and a C-terminal tripartite domain comprised of a PDZ domain, an Src homology 3 domain and a GUK domain with homology to guanylate kinase. CARD 14 is expressed in the placenta where it positively regulates apoptosis. CARD 14 also controls NF $\kappa$ B activation by phosphorylating BCL10, a signaling protein that activates NF $\kappa$ B through the I $\kappa$ B kinase complex. Epigallocatechin-3-gallate (EGCG) is a polyphenol that induces the expression of CARD 14.

## REFERENCES

1. Bertin, J., et al. 2001. CARD 11 and CARD 14 are novel caspase recruitment domain (CARD)/membrane-associated guanylate kinase (MAGUK) family members that interact with Bcl10 and activate NF $\kappa$ B. *J. Biol. Chem.* 276: 11877-11882.
2. Gaide, O., et al. 2001. Carma1, a CARD-containing binding partner of Bcl10, induces Bcl10 phosphorylation and NF $\kappa$ B activation. *FEBS Lett.* 496: 121-127.
3. Wang, L., et al. 2001. CARD 10 is a novel caspase recruitment domain/membrane-associated guanylate kinase family member that interacts with Bcl10 and activates NF $\kappa$ B. *J. Biol. Chem.* 276: 21405-21409.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607211. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Damiano, J.S., et al. 2004. CARD proteins as therapeutic targets in cancer. *Curr. Drug Targets.* 5: 367-374.
6. Seibl, R., et al. 2004. Pattern recognition receptors and their involvement in the pathogenesis of arthritis. *Curr. Opin. Rheumatol.* 16: 411-418.

## CHROMOSOMAL LOCATION

Genetic locus: CARD14 (human) mapping to 17q25.3; Card14 (mouse) mapping to 11 E2.

## SOURCE

CARD 14 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CARD 14 of human origin.

## 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.

## 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-49397 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CARD 14 (C-20) is recommended for detection of CARD 14 of mouse, rat 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).

CARD 14 (C-20) is also recommended for detection of CARD 14 in additional species, including porcine.

Suitable for use as control antibody for CARD 14 siRNA (h): sc-60330, CARD 14 siRNA (m): sc-60331, CARD 14 shRNA Plasmid (h): sc-60330-SH, CARD 14 shRNA Plasmid (m): sc-60331-SH, CARD 14 shRNA (h) Lentiviral Particles: sc-60330-V and CARD 14 shRNA (m) Lentiviral Particles: sc-60331-V.

Molecular Weight of CARD 14: 113 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.

## PROTOCOLS

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