

CARD 6 (R-17): sc-49404

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 6 is a 311 amino acid protein that associates with microtubules and acts as a selective mediator of NF κ B activation. CARD 6 is structurally and functionally related to the superfamily of interferon (IFN)-inducible GTPases, a group that comprises host defense proteins which mediate cell-autonomous immunity. RICK, the receptor-interacting protein (RIP)-like interacting caspase-like apoptosis regulatory protein kinase, interacts with CARD 6 and targets it to aggresomes, regions of the cell where protein aggregates collect.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609986. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Stehlik, C., et al. 2003. CARD 6 is a modulator of NF κ B activation pathways. *J. Biol. Chem.* 278: 31941-31949.
3. Carson, S.D., 2004. Coxsackievirus and adenovirus receptor (CAR) is modified and shed in membrane vesicles. *Biochemistry* 43: 8136-8142.
4. Hong, G.S. and Jung, Y.K. 2005. Caspase recruitment domain (CARD) as a bi-functional switch of caspase regulation and NF κ B signals. *J. Biochem. Mol. Biol.* 35: 19-23.
5. Dufner, A., et al. 2006. Caspase recruitment domain protein 6 is a microtubule-interacting protein that positively modulates NF κ B activation. *Proc. Natl. Acad. Sci. USA* 103: 988-993.
6. Chen, Y.R. and Clark, A.C. 2006. Substitutions of prolines examine their role in kinetic trap formation of the caspase recruitment domain (CARD) of RICK. *Protein Sci.* 15: 395-409.

CHROMOSOMAL LOCATION

Genetic locus: CARD6 (human) mapping to 5p13.1.

SOURCE

CARD 6 (R-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CARD 6 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

PRODUCT

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

Blocking peptide available for competition studies, sc-49404 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CARD 6 (R-17) is recommended for detection of CARD 6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 6 siRNA (h): sc-60332, CARD 6 shRNA Plasmid (h): sc-60332-SH and CARD 6 shRNA (h) Lentiviral Particles: sc-60332-V.

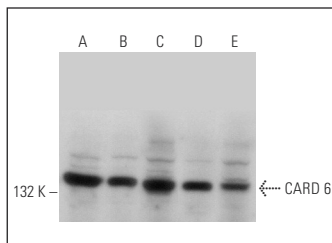
Molecular Weight of CARD 6: 116 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, MDA-MB-231 cell lysate: sc-2232 or HeLa whole cell lysate: sc-2200.

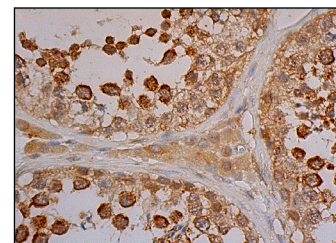
RECOMMENDED SECONDARY REAGENTS

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CARD 6 (R-17): sc-49404. Western blot analysis of CARD 6 expression in MCF7 (A), SW480 (B), MDA-MB-231 (C), HeLa (D) and NTERA-2 cl.D1 (E) whole cell lysates.



CARD 6 (R-17): sc-49404. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of cells in seminiferous ducts and Leydig cells.

RESEARCH USE

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