

CARD 8 (2108C2a): sc-81213

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, such as postsynaptic proteins, GKAPs, the tight junction associated proteins (ZO-1-3), and the caspase-associated recruitment domain (CARD) proteins, all of which are related to the *Drosophila* tumor suppressor discs-large (dlg) gene product. CARD 8, also designated DACAR, NDPP1, TUCAN or CARDINAL, is a 431 amino acid protein that is expressed in the lung, ovary, testis and placenta. It regulates cellular responses controlled by NFκB activation and may play a key role in apoptosis and chronic inflammatory disorders. CARD 8 binds to caspase-1 and negatively regulates its activity. CARD 8 interacts with IKKγ and FHL-2.

REFERENCES

1. Bouchier-Hayes, L., et al. 2001. CARDINAL, a novel caspase recruitment domain protein, is an inhibitor of multiple NFκB activation pathways. *J. Biol. Chem.* 276: 44069-44077.
2. Stilo, R., et al. 2002. TUCAN/CARDINAL and DRAL participate in a common pathway for modulation of NFκB activation. *FEBS Lett.* 521: 165-169.
3. Bouchier-Hayes, L. and Martin, S.J. 2004. CARDINAL roles in apoptosis and NFκB activation. *Vitam. Horm.* 67: 133-147.
4. Damiano, J.S. and Reed, J.C. 2004. CARD proteins as therapeutic targets in cancer. *Curr. Drug Targets* 5: 367-374.
5. Checinska, A., et al. 2006. TUCAN/CARDINAL/CARD8 and apoptosis resistance in non-small cell lung cancer cells. *BMC Cancer* 6: 166.
6. McGovern, D.P., et al. 2006. TUCAN (CARD8) genetic variants and inflammatory bowel disease. *Gastroenterology* 131: 1190-1196.
7. Checinska, A., et al. 2006. The expression of TUCAN, an inhibitor of apoptosis protein, in patients with advanced non-small cell lung cancer treated with chemotherapy. *Anticancer Res.* 26: 3819-3824.
8. Henckaerts, L., et al. 2007. Mutations in pattern recognition receptor genes modulate seroreactivity to microbial antigens in patients with inflammatory bowel disease. *Gut* 56: 1536-1542.
9. Fontalba, A., et al. 2007. Deficiency of the NFκB inhibitor caspase activating and recruitment domain 8 in patients with rheumatoid arthritis is associated with disease severity. *J. Immunol.* 179: 4867-4873.

CHROMOSOMAL LOCATION

Genetic locus: CARD8 (human) mapping to 19q13.33.

SOURCE

CARD 8 (2108C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of CARD 8 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

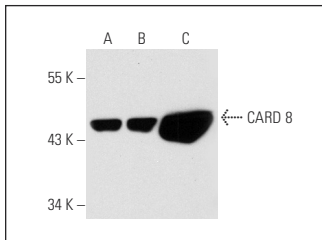
CARD 8 (2108C2a) is recommended for detection of CARD 8 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for CARD 8 siRNA (h): sc-105180, CARD 8 shRNA Plasmid (h): sc-105180-SH and CARD 8 shRNA (h) Lentiviral Particles: sc-105180-V.

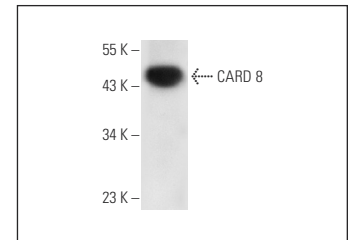
Molecular Weight of CARD 8: 49 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, HeLa whole cell lysate: sc-2200 or CARD 8 (h): 293T Lysate: sc-116655.

DATA



CARD 8 (2108C2a): sc-81213. Western blot analysis of CARD 8 expression in non-transfected 293T: sc-117752 (A), human CARD 8 transfected 293T: sc-116655 (B) and HeLa (C) whole cell lysates.



CARD 8 (2108C2a): sc-81213. Western blot analysis of CARD 8 expression in WI-38 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Mao, L., et al. 2018. Loss-of-function CARD8 mutation causes NLRP3 inflammasome activation and Crohn's disease. *J. Clin. Invest.* 128: 1793-1806.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

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