Revision 1

Phospho-CARD11 (Ser652) Antibody

#5189 Store at -20C

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	130	Rabbit	#Q9BXL7	84433

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-CARD11 (Ser652) Antibody detects endogenous levels of CARD11 protein only when phosphorylated at Ser652.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to a region surrounding Ser652 of human CARD11 protein. Antibodies were purified by protein A and peptide affinity chromatography.

Background

CARD11/Carma1/Bimp3 belongs to the MAGUK (membrane-associated guanylate kinase) family that typically function as molecular scaffolds in the assembly of multiprotein complexes (1,2). MAGUK family members contain an SH3 domain, a PDZ domain and a GuK domain homologous to guanylate kinase. In addition, CARD11 contains an amino-terminal CARD domain (caspase recruitment domain). This domain plays an important role in forming interactions with a number of proteins containing CARD domains that are involved in regulating apoptosis and NF-κB activation. CARD11 is predominately expressed in lymphocytes (1,2) and associates with the CARD domain of Bcl10. When overexpressed, CARD11 leads to the phosphorylation of Bcl10 and activation of NF-κB (1,2). CARD11 is constitutively associated with lipid rafts and is thought to function by recruiting Bcl10 and MALT1 and triggering the phosphorylation of IKKs (3,4). Several studies using the genetic disruption of CARD11 or dominant-negative mutations have demonstrated that it plays a critical role in NF-κB activation and lymphocyte signaling (4-7).
Phosphorylation at multiple sites within the central region of CARD11 regulates NF-κB activation (8-10).

Background References

1. Bertin, J. et al. (2001) *J. Biol. Chem.* 276, 11877–11882.
2. Gaide, O. et al. (2001) *FEBS Lett.* 496, 121-127.
3. Stilo, R. et al. (2004) *J. Biol. Chem.* 279, 34323-34331.
4. Wang, D. et al. (2002) *Nat. Immunol.* 3, 830-835.
5. Jun, J.E. et al. (2003) *Immunity* 18, 751-762.
6. Hara, H. et al. (2003) *Immunity* 18, 763-775.
7. Gaide, O. et al. (2002) *Nat. Immunol.* 3, 836-843.
8. Sommer, K. et al. (2005) *Immunity* 23, 561-74.
9. Shinohara, H. et al. (2007) *J Exp Med* 204, 3285-93.
10. Moreno-García, M.E. et al. (2009) *J Immunol* 183, 7362-70.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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