

## Product Information

### Anti-DOCK9 (Zizimin 1) antibody, Mouse monoclonal clone 8B3-C3-E4, purified from hybridoma cell culture

Catalog Number **SAB4200093**

#### Product Description

Monoclonal Anti-DOCK9 (Zizimin1) (mouse IgG2a isotype) is derived from the hybridoma 8B3-C3-E4 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with full length DOCK9 (Zizimin1) (GeneID 23348). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-DOCK9 (Zizimin1) recognizes human DOCK9. The product may be used in several immunochemical techniques including immunoblotting (~ 236 kDa), immunoprecipitation, immunocytochemistry, and immunohistochemistry.

The Rho family of GTPases, Rac, Rho and Cdc42 are critical in regulating actin-based cytoskeleton, cell migration, growth, survival and gene expression. These GTPases are activated by guanine nucleotide-exchange factors (GEFs).<sup>1-2</sup> The classical GEFs for Rho GTPases share a common motif, designated the Dbl-homology (DH) domain that mediates nucleotide exchange.<sup>3</sup> However, a second family of mammalian Rho-GEFs, CZH proteins, possess a novel type of GEF domain named CZH, (also known as DOCKER or DHR2 domain).<sup>4</sup> The CZH proteins include CDM (Ced-5, Dock180 and Myoblast city) proteins, which activate Rac, and Zizimin proteins, which activate Cdc42.<sup>5</sup> A member of this group, Zizimin1 (also known as DOCK9), was found to activate Cdc42 through binding to its CZH2 domain.<sup>4,6</sup> Interestingly, the N-terminal domain of Zizimin1 contains CZH1 which binds to its CZH2 domain and thus inhibits Cdc42 binding. The N-terminal also contains a Pleckstrin homology (PH) domain that binds phosphoinositides and mediates zizimin1 membrane targeting.<sup>7</sup>

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses.

#### Storage/Stability

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

**Immunoblotting:** A working antibody concentration of 3.0-6.0 µg/mL is recommended using MDA-MB-231 cell extracts.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

#### References

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2. Karisson, R., et al., *Biochem. Biophys. Acta*, **1796**, 91-98 (2009).
3. Hoffman, G.R., and Cerione, R.A., *FEBS Lett.*, **513**, 85-91 (2002).
4. Meller, N., et al., *J. Biol. Chem.*, **279**, 37470-37476 (2004).
5. Meller, N., et al., *J. Cell Sci.*, **118**, 4937-4936 (2005).
6. Meller, N., et al., *Nat. Cell Biol.*, **4**, 639-647 (2002).
7. Meller, N., et al., *Biochem. J.*, **409**, 525-533 (2008).

GG,TD,KAA,PHC 06/20-1