

Dia 2 (R-15): sc-10891

BACKGROUND

Dia 2, also known as DIAPH2 (diaphanous homolog 2), DRF2 or mDia3 of mouse origin, is a mammalian homolog of the *Drosophila* diaphanous gene, and belongs to a family of formin homology (FH) proteins which are characterized by having tandemly aligned FH1 (formin homology 1) and FH2 (formin homology 2) domains in their carboxy terminal regions. Dia 2 contains a DAD (diaphanous autoregulatory) domain, which is involved in the elongation of actin filaments, and a GBD/FH3 (Rho GTPase-binding/formin homology 3) domain, which interacts with the DAD domain via autoinhibitory interactions to regulate the activation of Dia 2. Expressed in testis and ovary, Dia 2 may be involved in oogenesis. Defects to the gene encoding Dia 2 have been implicated in premature ovarian failure type 2A, a disorder characterized by decreased ovarian function. Dia 2 exists as three alternatively spliced isoforms.

REFERENCES

1. Lynch, E.D., et al. 1997. Nonsyndromic deafness DFNA1 associated with mutation of a human homolog of the *Drosophila* gene diaphanous. *Science* 278: 1315-1318.
2. Bione, S., et al. 1998. A human homologue of the *Drosophila melanogaster* diaphanous gene is disrupted in a patient with premature ovarian failure: evidence for conserved function in oogenesis and implications for human sterility. *Am. J. Hum. Genet.* 62: 533-541.
3. Alberts, A.S., et al. 1998. Analysis of RhoA-binding proteins reveals an interaction domain conserved in heterotrimeric G protein β subunits and the yeast response regulator protein Skn7. *J. Biol. Chem.* 273: 8616-8622.
4. Nakano, K., et al. 1999. Distinct actions and cooperative roles of ROCK and mDia in Rho small G protein-induced reorganization of the actin cytoskeleton in Madin-Darby canine kidney cells. *Mol. Biol. Cell* 10: 2481-2491.

CHROMOSOMAL LOCATION

Genetic locus: DIAPH2 (human) mapping to Xq21.33; Diap2 (mouse) mapping to X E3.

SOURCE

Dia 2 (R-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Dia 2 of human origin.

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-10891 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Dia 2 (R-15) is recommended for detection of Dia 2 (also designated mDia3 of mouse origin) of mouse 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).

Dia 2 (R-15) is also recommended for detection of Dia 2 (also designated mDia3 of mouse origin) in additional species, including equine, bovine and avian.

Suitable for use as control antibody for Dia 2 siRNA (h): sc-35192, Dia 2 siRNA (m): sc-155883, Dia 2 shRNA Plasmid (h): sc-35192-SH, Dia 2 shRNA Plasmid (m): sc-155883-SH, Dia 2 shRNA (h) Lentiviral Particles: sc-35192-V and Dia 2 shRNA (m) Lentiviral Particles: sc-155883-V.

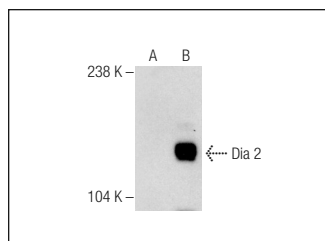
Molecular Weight of Dia 2: 134 kDa.

Positive Controls: Dia 2 (m): 293 Lysate: sc-178523 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) 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.

DATA



Dia 2 (R-15): sc-10891. Western blot analysis of Dia 2 expression in non-transfected: sc-110760 (A) and mouse Dia 2 transfected: sc-178523 (B) 293 whole cell lysates.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Dia 2 (H-3): sc-393489** or **Dia 2 (B-11): sc-55539**, our highly recommended monoclonal alternatives to Dia 2 (R-15).