

# Dia 2 (C-15): sc-10889

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Dia 2 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Dia 2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-10889 P, (100 µg 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 (C-15) is recommended for detection of Dia 2 (also designated mDia3 of mouse origin) of mouse, rat and 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)], 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 (C-15) is also recommended for detection of Dia 2 (also designated mDia3) in additional species, including equine.

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.

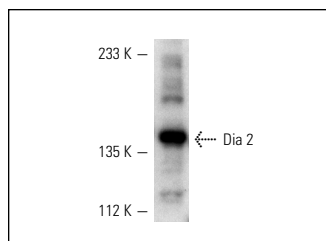
Molecular Weight of Dia 2: 134 kDa.

Positive Controls: mouse testis extract: sc-2405, RAW 264.7 nuclear extract: sc-24961 or HeLa whole cell lysate: sc-2200.

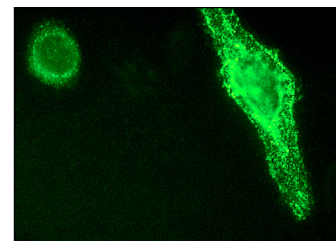
## RECOMMENDED SECONDARY REAGENTS

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.

## DATA



Dia 2 (C-15): sc-10889. Western blot analysis of Dia 2 expression in mouse testis extract.



Dia 2 (C-15): sc-10889. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Yasuda, S., et al. 2004. Cdc42 and mDia 3 regulate microtubule attachment to kinetochores. *Nature* 428: 767-771.
- Kamasani, U., et al. 2007. mDia function is critical for the cell suicide program triggered by farnesyl transferase inhibition. *Cancer Biol. Ther.* 6: 1422-1427.
- Hu, C.K., et al. 2008. Cell polarization during monopolar cytokinesis. *J. Cell Biol.* 181: 195-202.
- Goh, W.I., et al. 2012. mDia1 and WAVE2 proteins interact directly with IRSp53 in filopodia and are involved in filopodium formation. *J. Biol. Chem.* 287: 4702-4714.
- Johnsson, A.K. and Karlsson, R. 2012. Synaptotagmin 1 causes phosphatidyl inositol lipid-dependent actin remodeling in cultured non-neuronal and neuronal cells. *Exp. Cell Res.* 318: 114-126.

## 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 (C-15).