

# Dia 2 (C-7): sc-55540

## 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-7) is a mouse monoclonal antibody raised against amino acids 23-110 mapping near the N-terminus of Dia 2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

Dia 2 (C-7) is recommended for detection of Dia 2 (also designated mDia3 of mouse origin) of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

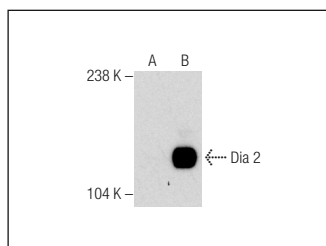
Molecular Weight of Dia 2: 134 kDa.

Positive Controls: Dia 2 (m): 293 Lysate: sc-178523, mouse testis extract: sc-2405 or HeLa whole cell lysate: sc-2200.

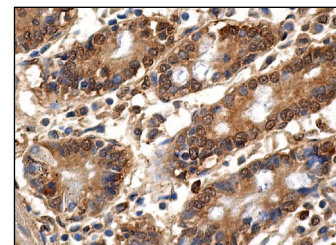
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Dia 2 (C-7): sc-55540. 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.



Dia 2 (C-7): sc-55540. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and nuclear staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Taiyab, A. and Rao, ChM. 2011. HSP90 modulates actin dynamics: inhibition of HSP90 leads to decreased cell motility and impairs invasion. *Biochim. Biophys. Acta* 1813: 213-221.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.