

girdin (H-6): sc-393757



The Power to Question

BACKGROUND

Girdin, also known as CCDC88A (coiled-coil domain-containing protein 88A), APE, GRDN, GIV or HkRP1, is a 1,871 amino acid protein that, via interactions with phosphoinositides, localizes to the cell membrane and to the cytosol. Expressed ubiquitously, girdin functions to enhance the activity of PI 3-kinase-dependent phosphorylation of proteins, such as Akt1, thereby inducing the phosphorylation of downstream protein targets and, ultimately, regulating DNA replication and cellular proliferation. Additionally, girdin is crucial for cell migration and is responsible for both maintaining the structural integrity of the Actin cytoskeleton and for regulating the formation of Actin stress fibers. Girdin exists as a homodimer that can itself be phosphorylated—an event that delocalizes girdin from the cell membrane, thus allowing it to participate in cell migration events. Two isoforms of girdin exist due to alternative splicing events.

REFERENCES

1. Enomoto, A., et al. 2005. Akt/PKB regulates Actin organization and cell motility via girdin/APE. *Dev. Cell* 9: 389-402.
2. Anai, M., et al. 2005. A novel protein kinase B (PKB)/Akt-binding protein enhances PKB kinase activity and regulates DNA synthesis. *J. Biol. Chem.* 280: 18525-18535.
3. Le-Niculescu, H., et al. 2005. Identification and characterization of GIV, a novel $G_{\alpha i/s}$ -interacting protein found on COPI, endoplasmic reticulum-Golgi transport vesicles. *J. Biol. Chem.* 280: 22012-22020.
4. Simpson, F., et al. 2005. A novel hook-related protein family and the characterization of hook-related protein 1. *Traffic* 6: 442-458.

CHROMOSOMAL LOCATION

Genetic locus: CCDC88A (human) mapping to 2p16.1; Ccdc88a (mouse) mapping to 11 A3.3.

SOURCE

girdin (H-6) is a mouse monoclonal antibody raised against amino acids 1168-1294 mapping within an internal region of girdin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

girdin (H-6) is available conjugated to agarose (sc-393757 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393757 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393757 PE), fluorescein (sc-393757 FITC), Alexa Fluor® 488 (sc-393757 AF488), Alexa Fluor® 546 (sc-393757 AF546), Alexa Fluor® 594 (sc-393757 AF594) or Alexa Fluor® 647 (sc-393757 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393757 AF680) or Alexa Fluor® 790 (sc-393757 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

girdin (H-6) is recommended for detection of girdin isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for girdin siRNA (h): sc-94984, girdin siRNA (m): sc-145407, girdin shRNA Plasmid (h): sc-94984-SH, girdin shRNA Plasmid (m): sc-145407-SH, girdin shRNA (h) Lentiviral Particles: sc-94984-V and girdin shRNA (m) Lentiviral Particles: sc-145407-V.

Molecular Weight (predicted) of girdin: 200 kDa.

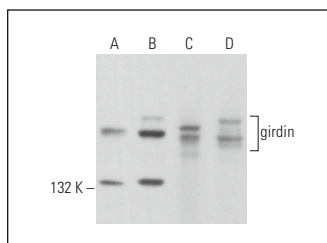
Molecular Weight (observed) of girdin: 210 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, MDA-MB-435S whole cell lysate: sc-364184 or human lung extract: sc-363767.

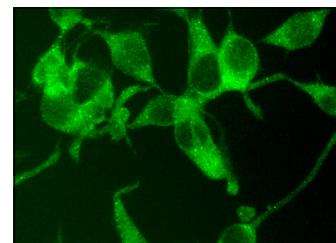
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



girdin (H-6): sc-393757. Western blot analysis of girdin expression in NIH/3T3 (A) and MDA-MB-435S (B) whole cell lysates and human lung (C) and rat brain (D) tissue extracts.



girdin (H-6): sc-393757. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Rahman-Zaman, A., et al. 2018. Cell migration in microfabricated 3D collagen microtracks is mediated through the prometastatic protein girdin. *Cell. Mol. Bioeng.* 11: 1-10.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA