

Dab1 (G-5): sc-271136

BACKGROUND

Dab1, a homolog of the *Drosophila* disabled protein, is an adaptor protein involved in neural development. This cytoplasmic protein is tyrosine-phosphorylated during rapid expansion of the developing nervous system, and it is thought to interact with other proteins via a domain similar to the PTB domains of the Shc family. Dab1 has been shown to interact with the SH2 domains of Src, Fyn and Abl. Mutations in Dab1 result in widespread abnormalities in the brain, similar to those seen in Reelin mutants. Reelin is a secreted protein thought to play a role in directing migrating neurons. Evidence suggests that Dab1 functions downstream of Reelin in a signaling pathway involved in positioning cells in the developing brain. Dab2 (also designated DOC-2) is a mitogen-responsive phosphoprotein that binds the SH3 domain of GRB2, and it is thought to be a negative regulator of growth.

CHROMOSOMAL LOCATION

Genetic locus: DAB1 (human) mapping to 1p32.2; Dab1 (mouse) mapping to 4 C6.

SOURCE

Dab1 (G-5) is a mouse monoclonal antibody raised against amino acids 451-553 of Dab1 of human origin.

PRODUCT

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

Dab1 (G-5) is available conjugated to agarose (sc-271136 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271136 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271136 PE), fluorescein (sc-271136 FITC), Alexa Fluor® 488 (sc-271136 AF488), Alexa Fluor® 546 (sc-271136 AF546), Alexa Fluor® 594 (sc-271136 AF594) or Alexa Fluor® 647 (sc-271136 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271136 AF680) or Alexa Fluor® 790 (sc-271136 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Dab1 (G-5) is recommended for detection of Dab1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Dab1 (G-5) is also recommended for detection of Dab1 in additional species, including equine and canine.

Suitable for use as control antibody for Dab1 siRNA (h): sc-35165, Dab1 siRNA (m): sc-35166, Dab1 shRNA Plasmid (h): sc-35165-SH, Dab1 shRNA Plasmid (m): sc-35166-SH, Dab1 shRNA (h) Lentiviral Particles: sc-35165-V and Dab1 shRNA (m) Lentiviral Particles: sc-35166-V.

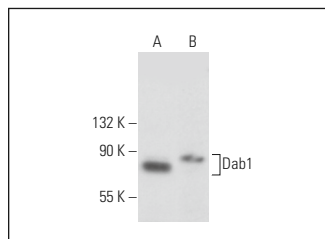
Molecular Weight of Dab1: 80 kDa.

Positive Controls: rat brain extract: sc-2392, CCRF-CEM cell lysate: sc-2225 or Dab1 (h): 293T Lysate: sc-112502.

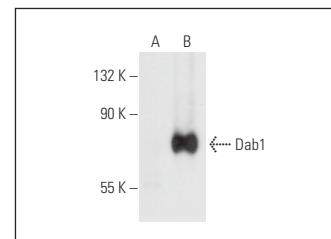
STORAGE

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

DATA



Dab1 (G-5): sc-271136. Western blot analysis of Dab1 expression in CCRF-CEM whole cell lysate (A) and rat brain tissue extract (B).



Dab1 (G-5): sc-271136. Western blot analysis of Dab1 expression in non-transfected: sc-117752 (A) and human Dab1 transfected: sc-112502 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Sánchez-Sánchez, S.M., et al. 2018. Rare RELN variants affect Reelin-Dab1 signal transduction in autism spectrum disorder. *Hum. Mutat.* 39: 1372-1383.
- Liu, T.T., et al. 2018. Ephrin-B3 modulates hippocampal neurogenesis and the reelin signaling pathway in a pilocarpine-induced model of epilepsy. *Int. J. Mol. Med.* 41: 3457-3467.
- Bernardoni, R., et al. 2018. A new Bcr-Abl1 *Drosophila* model as a powerful tool to elucidate pathogenesis and progression of chronic myeloid leukemia. *Haematologica* 104: 717-728.
- Halloran, M., et al. 2020. Amyotrophic lateral sclerosis-linked UBQLN2 mutants inhibit endoplasmic reticulum to Golgi transport, leading to Golgi fragmentation and ER stress. *Cell. Mol. Life Sci.* 77: 3859-3873.
- Feng, M., et al. 2020. Carnosic acid reverses the inhibition of ApoE4 on cell surface level of ApoER2 and reelin signaling pathway. *J. Alzheimers Dis.* 73: 517-528.
- Lopera, F., et al. 2023. Resilience to autosomal dominant Alzheimer's disease in a Reelin-COLBOS heterozygous man. *Nat. Med.* 29: 1243-1252.
- Park, H.R., et al. 2024. Herbal formula extract ameliorates anxiety and cognitive impairment via regulation of the reelin/Dab1 pathway in a murine model of post-traumatic stress disorder. *Pharmaceutics* 16: 1150.
- Lagani, G.D., et al. 2024. Beyond glycolysis: aldolase A is a novel effector in reelin mediated dendritic development. *bioRxiv*. E-published.

RESEARCH USE

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

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