Datasheet for ABIN6658036

anti-DAB1 antibody (AA 400-555)

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Overview

Quantity:	25 µL
Target:	DAB1
Binding Specificity:	AA 400-555
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This DAB1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP), Fluorescence Microscopy (FM)

Product Details

Purpose:	Dab1 Antibody
Immunogen:	This whole rabbit serum was prepared by repeated immunizations with a synthetic peptide corresponding to the C-terminal region of murine Dab1 at amino acids 400-555.
Isotype:	IgG
Cross-Reactivity (Details):	This antibody is directed against Dab1 from mouse.
Purification:	Dab-1 whole rabbit antiserum was prepared by delipidation and defibrination followed by the addition of buffer salts and preservative.
Sterility:	Sterile filtered

Target Details

Target:	DAB1
Alternative Name:	Dab1 (DAB1 Products)
Background:	Synonyms: rabbit anti-Dab 1 antibody, Disabled homolog 1 antibody, Disabled homolog 1 Drosophila antibody, Scm antibody, Scr antibody, Scrambler antibody, Yot antibody, Yotari antibody Background: Anti-Dab1 Antibody recognizes Dab1 that is a phosphoprotein encoded by the mouse gene dab and is related to the Drosophila gene 'disabled'. Mutations in the mouse dab gene may result in the 'scrambler' and 'yotari' phenotypes. Dab1 binds to non-receptor tyrosine kinases and plays an important role in brain development. Dab1 is expressed in neuronal populations exposed to reelin, and it functions as a signaling molecule that regulates cell positioning in the developing brain. Cloning of human Dab1 and sequence determinations suggest a 96 % identity to the mouse sequence. Dab1 binds to cytoplasmic regions of very low density lipoprotein receptors (VLDLR), apolipoprotein E receptor-2 (ApoER2) and the Amyloid Precursor Protein (APP) family of proteins. Dab1 accumulates in ectopic neurons from mice lacking Reelin or both VLDLR and ApoER2. In humans, Dab1 has been mapped to lp32-p312. This region shows homology of synteny with the segment of mouse chromosome 4 containing Dab1. Gene Name: DAB1
Gene ID:	13131
NCBI Accession:	NP_034144
UniProt:	P97318

Application Details

Application Notes:	Immunoprecipitation_Dilution: 1 µL per 500 µg ELISA_Dilution: 1:10,000 - 1:50,000 Immunohistochemistry_Dilution: 1:5,000 IF_Microscopy_Dilution: User Optimized Western_Blot_Dilution: 1:5,000 Other: User Optimized
Comment:	Suggested Applications: Biochemical Assay, IF, Multiplex Anti-Dab1 antibody has been tested by western blot and immunohistochemistry and is suitable for the detection of Dab1 by immunoprecipitation. Specific conditions for reactivity should be optimized by the end user. Expect a band at 80 kDa corresponding to Dab1 in the appropriate

Application Details

	tissue extract or cell lysate. For western blotting block the blot using 5% BLOTTO for 1 h at room temperature and followed by incubation with the primary antibody diluted in 1% BLOTTO in TTBS for 1 h at room temperature. For immunoprecipitation use 1 µl of antiserum per 500 µ g of brain lysate. Perform immunoprecipitation at 4°C for 2 h. For immunoprecipitation buffer lysates with 50 mM Tris-Cl, pH 7.4, supplemented with 150 mM sodium chloride, 1% (v/v) NP-40, 10 µg/ml aprotinin and 10 µg/ml leupeptin.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiry Date:	12 months

Publications

Product cited in:	Wang, Lei, Wang, Yu, He, Zhao, Hu, Xu, Jin, Gu, Guo, Yang, Gao, Wang: "The ZSWIM8 ubiquitin ligase regulates neurodevelopment by guarding the protein quality of intrinsically disordered Dab1." in: **Cerebral cortex (New York, N.Y. : 1991)**, Vol. 33, Issue 7, pp. 3866-3881, (2023) (PubMed). Reyes, Hino, Canales, Dickson, La Torre, Simó: "The E3 Ubiquitin Ligase CRL5 Regulates

Publications

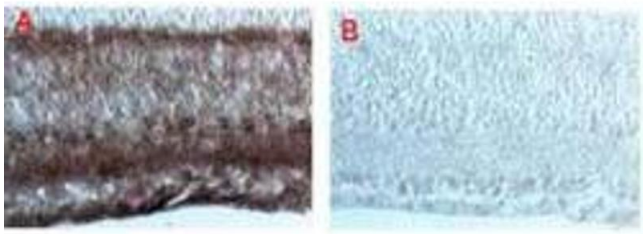
Dentate Gyrus Morphogenesis, Adult Neurogenesis, and Animal Behavior." in: **Frontiers in neuroscience**, Vol. 16, pp. 908719, (2022) (PubMed).

Meseke, Neumüller, Brunne, Li, Anstötz, Pohlkamp, Rogalla, Herz, Rune, Bender: "Distal Dendritic Enrichment of HCN1 Channels in Hippocampal CA1 Is Promoted by Estrogen, but Does Not Require Reelin." in: **eNeuro**, Vol. 5, Issue 5, (2019) (PubMed).

Fairchild, Hino, Han, Miltner, Peinado Allina, Brown, Burns, La Torre, Simó: "RBX2 maintains final retinal cell position in a DAB1-dependent and -independent fashion." in: **Development (Cambridge, England)**, Vol. 145, Issue 3, (2018) (PubMed).

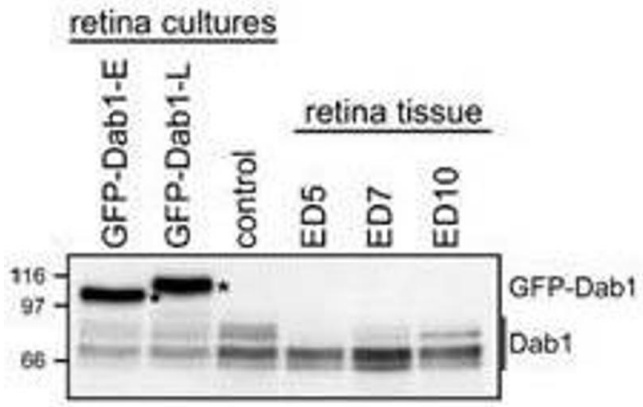
O'Brien, Hirano, Buttermore, Bhat, Peles: "Localization of the paranodal protein Caspr in the mammalian retina." in: **Molecular vision**, Vol. 16, pp. 1854-63, (2011) (PubMed).

Images



Immunofluorescence

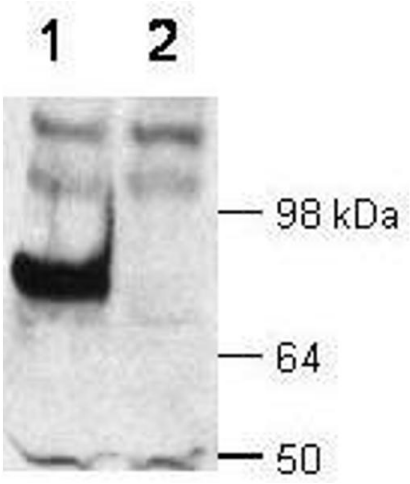
Image 1. IF - Dab1 Antibody Immunohistochemical staining after cryofixation and sectioning of mouse brain tissue using (A) a 1:5,000 dilution of anti-Dab-1 and (B) 1:5,000 dilution of pre-immune serum followed by processing with HRP Goat anti-Rabbit IgG [H&L] and chromogenic substrate.



Western Blotting

Image 2. WB - Dab1 Antibody Analysis of GFP-Dab1 and endogenous Dab1 levels in transfected retinal cells and retinal tissue. Western blot analysis of whole cell lysates prepared from primary retinal cultures transfected with GFP-Dab1-E (lane 1), -L (lane 2), control untransfected retinal cultures (lane 3), and retinal tissue at ED5 (lane 4), ED7 (lane 5) and ED10 (lane 6). Proteins were electrophoresed through an SDS-8% polyacrylamide gel and

transferred to nitrocellulose. The membrane was immunostained with Immunochemical's anti-Dab1 antibody, which recognizes both GFP-Dab1 (indicated by asterisks) and endogenous forms of Dab1 (indicated by a line). See Katval et al (2007) for additional details.



Western Blotting

Image 3. WB - Dab1 Antibody Immunochemical's anti-Dab1 is shown to detect Dab1 present in wt mouse brain extracts (lane 1). No staining is noted in similar extracts from a dab knock-out mouse (lane 2). Detection of an 80 kDa band (arrowhead) occurs using a 1:5,000 dilution of the antibody in 1% milk in TTBS for 1 h at room temperature followed by a 1:5,000 dilution of HRP Goat-a-Rabbit with ECL visualization. Film exposure was ~1'. Other detection systems will yield similar results. Storage Conditions: Store vial at -20° C prior to opening. For extended storage, aliquot contents and freeze at -20° C. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening.