

KD-Validated Anti-DAB2 Rabbit Monoclonal Antibody

Rabbit monoclonal Antibody

Catalog # AGI2209

Product Information

Application	WB, FC
Primary Accession	P98082
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB225
Calculated MW	82448
Gene Name	DAB2
Aliases	DAB2; DAB Adaptor Protein 2; DOC-2; Differentially Expressed In Ovarian Carcinoma 2; Differentially-Expressed Protein 2; DAB2, Clathrin Adaptor Protein 2; Adaptor Molecule Disabled-2; Disabled Homolog 2; DOC2; Disabled (Drosophila) Homolog 2 (Mitogen-Responsive Phosphoprotein); Disabled Homolog 2, Mitogen-Responsive Phosphoprotein (Drosophila); Dab, Mitogen-Responsive Phosphoprotein, Homolog 2 (Drosophila); Disabled Homolog 2, Mitogen-Responsive Phosphoprotein; Dab, Mitogen-Responsive Phosphoprotein, Homolog 2
Immunogen	A synthesized peptide derived from human DAB2

Additional Information

Gene ID	1601
Other Names	Disabled homolog 2, Adaptor molecule disabled-2, Differentially expressed in ovarian carcinoma 2, DOC-2, Differentially-expressed protein 2, DAB2, DOC2

Protein Information

Name	DAB2
Synonyms	DOC2
Function	Adapter protein that functions as a clathrin-associated sorting protein (CLASP) required for clathrin-mediated endocytosis of selected cargo proteins. Can bind and assemble clathrin, and binds simultaneously to phosphatidylinositol 4,5-bisphosphate (PtdIns(4,5)P2) and cargos containing non-phosphorylated NPXY internalization motifs, such as the LDL receptor, to recruit them to clathrin-coated pits. Can function in clathrin-mediated endocytosis independently of the AP-2 complex. Involved in endocytosis of integrin beta-1; this function seems to be redundant with the AP-2 complex and seems to require DAB2 binding to endocytosis accessory EH domain-containing proteins such as EPS15, EPS15L1 and ITSN1. Involved in endocytosis of cystic fibrosis transmembrane conductance regulator/CFTR.

Involved in endocytosis of megalin/LRP2 lipoprotein receptor during embryonal development. Required for recycling of the TGF-beta receptor. Involved in CFTR trafficking to the late endosome. Involved in several receptor-mediated signaling pathways. Involved in TGF-beta receptor signaling and facilitates phosphorylation of the signal transducer SMAD2. Mediates TGF-beta-stimulated JNK activation. May inhibit the canonical Wnt/beta-catenin signaling pathway by stabilizing the beta-catenin destruction complex through a competing association with axin preventing its dephosphorylation through protein phosphatase 1 (PP1). Sequesters LRP6 towards clathrin-mediated endocytosis, leading to inhibition of Wnt/beta-catenin signaling. May activate non-canonical Wnt signaling. In cell surface growth factor/Ras signaling pathways proposed to inhibit ERK activation by interrupting the binding of GRB2 to SOS1 and to inhibit SRC by preventing its activating phosphorylation at 'Tyr-419'. Proposed to be involved in modulation of androgen receptor (AR) signaling mediated by SRC activation; seems to compete with AR for interaction with SRC. Plays a role in the CSF-1 signal transduction pathway. Plays a role in cellular differentiation. Involved in cell positioning and formation of visceral endoderm (VE) during embryogenesis and proposed to be required in the VE to respond to Nodal signaling coming from the epiblast. Required for the epithelial to mesenchymal transition, a process necessary for proper embryonic development. May be involved in myeloid cell differentiation and can induce macrophage adhesion and spreading. May act as a tumor suppressor.

Cellular Location

Cytoplasm. Cytoplasmic vesicle, clathrin-coated vesicle membrane. Membrane, clathrin-coated pit. Note=Colocalizes with large insert-containing isoforms of MYO6 at clathrin-coated pits/vesicles. During mitosis is progressively displaced from the membrane and translocated to the cytoplasm

Tissue Location

Expressed in deep invaginations, inclusion cysts and the surface epithelial cells of the ovary. Also expressed in breast epithelial cells, spleen, thymus, prostate, testis, macrophages, fibroblasts, lung epithelial cells, placenta, brain stem, heart and small intestine. Expressed in kidney proximal tubular epithelial cells (at protein level).

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