

KD-Validated Anti-ECT2 Mouse Monoclonal Antibody

Mouse monoclonal antibody

Catalog # AGI2041

Product Information

Application	WB, FC
Primary Accession	Q9H8V3
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	24GB8265
Calculated MW	103505
Gene Name	ECT2
Aliases	ECT2; Epithelial Cell Transforming 2; ARHGEF31; Epithelial Cell-Transforming Sequence 2 Oncogene; Protein ECT2; Epithelial Cell Transforming Sequence 2 Oncogene
Immunogen	Recombinant protein of human ECT2

Additional Information

Gene ID	1894
Other Names	Protein ECT2, Epithelial cell-transforming sequence 2 oncogene, ECT2 (HGNC:3155)

Protein Information

Name	ECT2 (HGNC:3155)
Function	Guanine nucleotide exchange factor (GEF) that catalyzes the exchange of GDP for GTP. Promotes guanine nucleotide exchange on the Rho family members of small GTPases, like RHOA, RHOC, RAC1 and CDC42. Required for signal transduction pathways involved in the regulation of cytokinesis. Component of the centralspindlin complex that serves as a microtubule-dependent and Rho-mediated signaling required for the myosin contractile ring formation during the cell cycle cytokinesis. Regulates the translocation of RHOA from the central spindle to the equatorial region. Plays a role in the control of mitotic spindle assembly; regulates the activation of CDC42 in metaphase for the process of spindle fibers attachment to kinetochores before chromosome congression. Involved in the regulation of epithelial cell polarity; participates in the formation of epithelial tight junctions in a polarity complex PARD3-PARD6-protein kinase PRKQC-dependent manner. Plays a role in the regulation of neurite outgrowth. Inhibits phenobarbital (PB)-induced NR1I3 nuclear translocation. Stimulates the activity of RAC1 through its association with the oncogenic PARD6A- PRKCI complex in cancer cells, thereby acting to coordinately drive tumor cell proliferation and invasion. Also stimulates genotoxic

stress-induced RHOB activity in breast cancer cells leading to their cell death.

Cellular Location

Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Cleavage furrow. Midbody. Cell junction. Cell junction, tight junction. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Sequestered within the nucleus during interphase (PubMed:10579713). Dispersed throughout the cytoplasm upon breakdown of the nuclear envelope during mitosis (PubMed:10579713). Colocalizes with the centralspindlin complex to the mitotic spindles during anaphase/metaphase, the cleavage furrow during telophase and at the midbody at the end of cytokinesis (PubMed:10579713). Colocalized with RhoA at the midbody (PubMed:10579713). Its subcellular localization to tight junction is increased by calcium (PubMed:15254234).

Tissue Location

Expressed in lung epithelial cells (at protein level). Expressed in squamous cell carcinoma, primary non-small cell lung cancer tumors and lung adenocarcinoma

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