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KD-Validated Anti-ECT2 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2041

Specification

KD-Validated Anti-ECT2 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q9H8V3
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 104 kDa, observed, 104 kDa KDa**
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**

KD-Validated Anti-ECT2 Mouse Monoclonal Antibody - Additional Information

Gene ID	**1894**

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

KD-Validated Anti-ECT2 Mouse Monoclonal Antibody - 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 PRKCQ-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).

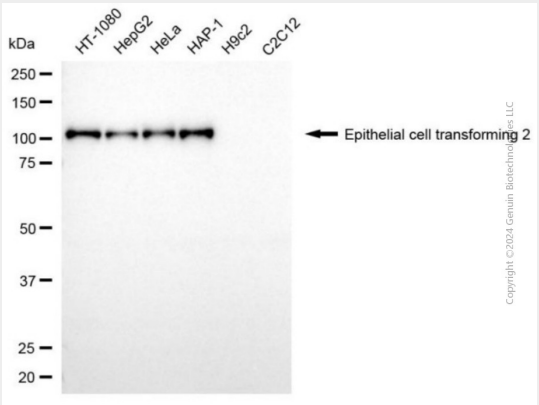
Tissue Location
Expressed in lung epithelial cells (at protein level). Expressed in squamous cell carcinoma, primary non-small cell lung cancer tumors and lung adenocarcinoma

KD-Validated Anti-ECT2 Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-ECT2 Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-epithelial cell transforming 2 antibody (Cat#AGI2041). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-epithelial cell transforming 2 antibody (Cat#AGI2041, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.

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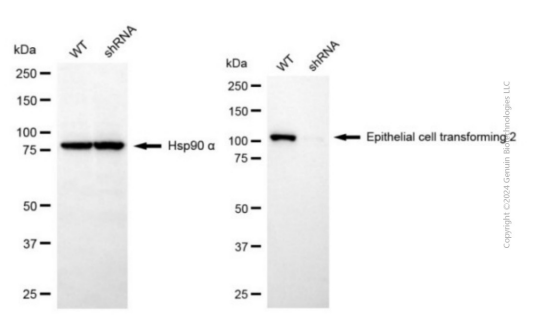
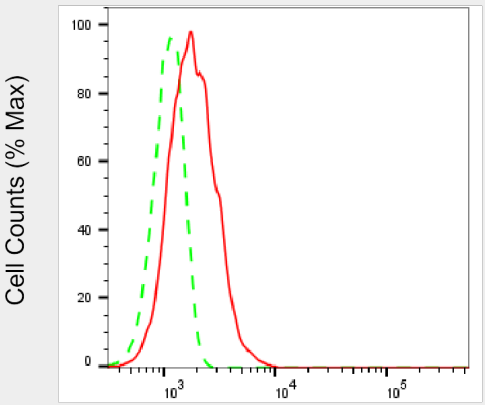


Western blotting analysis using anti-epithelial cell transforming 2 antibody (Cat#AGI2041). Epithelial cell transforming 2 expression in wild type (WT) and epithelial cell transforming 2 (ECT2) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-epithelial cell transforming 2 antibody (Cat#AGI2041, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of Epithelial cell transforming 2 expression in HT-1080 cells using anti-Epithelial cell transforming 2 antibody (Cat#AGI2041, 1:1,000). Green, isotype control; red, Epithelial cell transforming 2.