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Goat Anti-ECT2 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1354a

Specification

Goat Anti-ECT2 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q9H8V3
Other Accession	NP_060568, 1894
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**103505**

Goat Anti-ECT2 Antibody - Additional Information

Gene ID 1894

Other Names
Protein ECT2, Epithelial cell-transforming sequence 2 oncogene, ECT2

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-ECT2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-ECT2 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

Goat Anti-ECT2 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

Goat Anti-ECT2 Antibody - Images

Goat Anti-ECT2 Antibody - Background

The protein encoded by this gene is a transforming protein that is related to Rho-specific exchange factors and yeast cell cycle regulators. The expression of this gene is elevated with the onset of DNA synthesis and remains elevated during G2 and M phases. In situ hybridization analysis showed that expression is at a high level in cells undergoing mitosis in regenerating liver. Thus, this protein is expressed in a cell cycle-dependent manner during liver regeneration, and is thought to have an important role in the regulation of cytokinesis.

Goat Anti-ECT2 Antibody - References

Ect2 links the PKCiota-Par6alpha complex to Rac1 activation and cellular transformation. Justilien V, et al. Oncogene, 2009 Oct 15. PMID 19617897.
Plk1 self-organization and priming phosphorylation of HsCYK-4 at the spindle midzone regulate the onset of division in human cells. Burkard ME, et al. PLoS Biol, 2009 May 5. PMID 19468302.
Polo-like kinase 1 directs assembly of the HsCyk-4 RhoGAP/Ect2 RhoGEF complex to initiate cleavage furrow formation. Wolfe BA, et al. PLoS Biol, 2009 May 5. PMID 19468300.
Involvement of epithelial cell transforming sequence-2 oncoantigen in lung and esophageal cancer

progression. Hirata D, et al. Clin Cancer Res, 2009 Jan 1. PMID 19118053.
CUX1 and E2F1 regulate coordinated expression of the mitotic complex genes Ect2, MgcRacGAP, and MKLP1 in S phase. Seguin L, et al. Mol Cell Biol, 2009 Jan. PMID 19015243.