

**Goat Anti-ECT2 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1354a****Specification**

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**Goat Anti-ECT2 Antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">O9H8V3</a>
Other Accession	<a href="#">NP_060568</a> , <a href="#">1894</a>
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

**Dilution**

WB~~1:1000

E~~N/A

**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 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

### **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 Cytometry](#)
- [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 PKC $\alpha$ -Par6 $\alpha$  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 HsCdk-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.