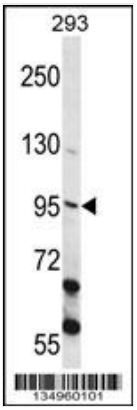
ECT2 Antibody – Rabbit Polyclonal

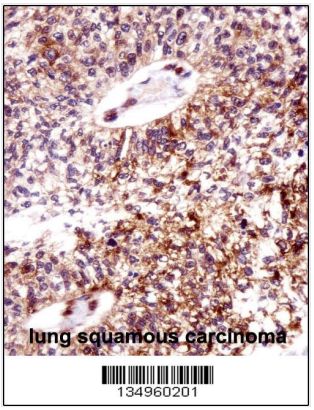
PRODUCT OVERVIEW

Product Name	ECT2, Polyclonal Antibody
Full Product Name	ECT2 Antibody (Center)
Product Gene Name	anti-ECT2 antibody
Product Synonym Names	Protein ECT2; Epithelial cell-transforming sequence 2 oncogene; ECT2
Clonality	Polyclonal
Isotype	Rabbit Ig
Host	Rabbit
Species Reactivity	Human (Predicted Reactivity: Mouse)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Purity/Purification	Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
Concentration	Vial Concentration: 0.5 (lot specific)
Specificity	This ECT2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 597-625 amino acids from the Central region of human ECT2.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Antibody/Peptide Pairs	ECT2 peptide (MBS9221071) is used for blocking the activity of ECT2 antibody (MBS9206215)
Molecular Weight	103505
Immunogen Sequence Positions	597-625
OMIM	600586
3D Structure	ModBase 3D Structure for Q9H8V3
Antigen Type	Synthetic Peptide
Antigen Source	HUMAN
Product Categories/Family for anti-ECT2 antibody	Cell Biology
Applications Tested/Suitable for anti-ECT2 antibody	Western Blot (WB), ELISA (EIA), Immunohistochemistry (IHC)
Application Notes for anti-ECT2 antibody	WB~~1:1000
Related Product Information for anti-ECT2 antibody	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.

Product References and Citations for anti-ECT2 antibody	Justilien, V., et al. Oncogene 28(41):3597-3607(2009) Burkard, M.E., et al. PLoS Biol. 7 (5), E1000111 (2009) : Wolfe, B.A., et al. PLoS Biol. 7 (5), E1000110 (2009) : Hirata, D., et al. Clin. Cancer Res. 15(1):256-266(2009) Seguin, L., et al. Mol. Cell. Biol. 29(2):570-581(2009)
Other Notes	Small volumes of anti-ECT2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ECT2 purchase	MBS9206215 is an antibody targeting ECT2. Also known as ECT2 Antibody (Center). Reactive in Human (Predicted Reactivity: Mouse). Host: Rabbit.



Western Blot (WB) of anti-ECT2 antibody
ECT2 Antibody (Center) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the ECT2 antibody detected the ECT2 protein (arrow).



Immunohistochemistry (IHC) of anti-ECT2 antibody
ECT2 Antibody (Center) (MBS9206215)immunohistochemistry analysis in formalin fixed and paraffin embedded human lung squamous carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of ECT2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ECT2. It may not necessarily be applicable to this product.

NCBI GI #	385198079
NCBI GeneID	1894
NCBI Accession #	NP_001245244.1
NCBI Related Accession #	NP_001245245.1; NP_060568.3
UniProt Primary Accession #	Q9H8V3
UniProt Secondary Accession #	Q0MT80; Q2M269; Q6U836; Q9NSV8; Q9NVW9
UniProt Related Accession #	Q9H8V3
GenBank Nucleotide #	NM_001258315.1
NCBI Official Full Name	protein ECT2 isoform a
NCBI Official Synonym Full Names	epithelial cell transforming 2
NCBI Official Symbol	ECT2
NCBI Official Synonym Symbols	ARHGEF31
UniProt Protein Name	Protein ECT2
UniProt Synonym Protein Names	Epithelial cell-transforming sequence 2 oncogene
Protein Family	Protein
UniProt Gene Name	ECT2

UniProt Entry Name	ECT2_HUMAN
NCBI Protein Information	protein ECT2
NCBI Summary for ECT2	The protein encoded by this gene is a guanine nucleotide exchange factor and 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. Several transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Apr 2012]
UniProt Comments for ECT2	ECT2: 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. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Motility/polarity/chemotaxis; GEFs; GEFs, Rac/Rho Chromosomal Location of Human Ortholog: 3q26.1-q26.2 Cellular Component: nuclear membrane; tight junction; intracellular membrane-bound organelle; cytoplasm; midbody; intercellular junction; nucleus; cytosol; cleavage furrow Molecular Function: signal transducer activity; protein binding; Rho guanyl-nucleotide exchange factor activity; Rho GTPase binding; protein homodimerization activity; GTPase activator activity Biological Process: positive regulation of cytokinesis; regulation of attachment of spindle microtubules to kinetochore; positive regulation of I-kappaB kinase/NF-kappaB cascade; nerve growth factor receptor signaling pathway; positive regulation of apoptosis; cell morphogenesis; cytokinesis; protein transport; regulation of small GTPase mediated signal transduction; positive regulation of protein import into nucleus; small GTPase mediated signal transduction; activation of protein kinase activity; regulation of protein kinase activity; positive regulation of neuron differentiation; protein homooligomerization
Research Articles on ECT2	**1.** ECT2 expression is positively correlated with WHO pathologic grading and unfavorable survival, suggesting that ECT2 may be a potential therapeutic candidate in human gliomas.
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