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Product datasheet

Anti-ECT2 antibody - N-terminal ab151503

1 References 1 Image

Overview

Product name	Anti-ECT2 antibody - N-terminal
Description	Rabbit polyclonal to ECT2 - N-terminal
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to a region within N terminal amino acids 1-44 of Human ECT2 (Uniprot: Q9H8V3). Run BLAST with ExPASy Run BLAST with NCBI
Positive control	Human A549 xenograft tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 79.99% PBS, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab151503 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/1000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Or perform heat mediated antigen retrieval with Tris-EDTA buffer pH 8 .

Target

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.

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

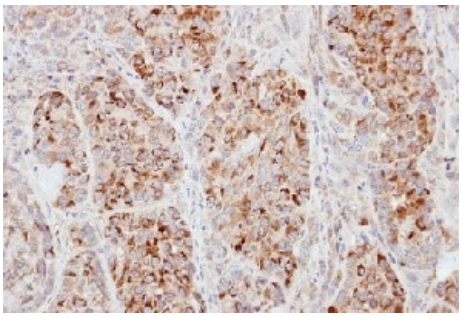
Sequence similarities Contains 2 BRCT domains.
Contains 1 DH (DBL-homology) domain.
Contains 1 PH domain.

Domain The BRCT domain 1 and 2 are required for the intramolecular interaction, but not for the intermolecular oligomerization. The BRCT domains negatively inhibit its GEF activity in interphase cells. The same BRCT domains may act as a positive regulatory motif for the completion of cytokinesis after the breakdown of nuclear membrane during mitosis.

Post-translational modifications Phosphorylated by PLK1 in vitro. Hyperphosphorylated during the G2 phase of the cell cycle. Phosphorylation at Thr-373 occurs during the G2/M phase, relieves its auto-inhibition status and stimulates its GEF activity. Phosphorylation at Thr-444 in G2/M phase is required for subsequent binding with PLK1 and Rho exchange activation. Dephosphorylated at the time of cytokinesis. Phosphorylation at Thr-359 is required for its transformation activity in cancer cells.

Cellular localization Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Cleavage furrow. Midbody. Cell junction. Cell junction, tight junction. Sequestered within the nucleus during interphase. Dispersed throughout the cytoplasm upon breakdown of the nuclear envelope during mitosis. 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. Colocalized with RhoA at the midbody. Its subcellular localization to tight junction is increased by calcium. Localized predominantly in the cytoplasm of numerous carcinoma cells.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ECT2 antibody - N-terminal (ab151503)

Immunohistochemical analysis of paraffin-embedded Human A549 xenograft tissue, labeling ECT2 with ab151503 at 1/100 dilution.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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