10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-RALA Picoband Antibody

Catalog # ABO12480

Product Information

Application	WB
Primary Accession	P11233
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Ras-related protein Ral-A(RALA) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5898
Other Names	Ras-related protein Ral-A, RALA, RAL
Calculated MW	23567
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cell surface. Cell membrane; Lipid-anchor; Cytoplasmic side. Cleavage furrow. Midbody. Prior to LPA treatment found predominantly at the cell surface and in the presence of LPA colocalizes with LPAR1 and LPAR2 in the endocytic vesicles. During early cytokinesis localizes at the cleavage furrow membrane. Colocalizes with EXOC2 at the early midbody ring and persists there till maturation of the midbody.
Source	Eukaryota
Protein Name	Ras-related protein Ral-A
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human RALA (165-203aa DKVFFDLMREIRARKMEDSKEKNGKKKRKSLAKRIRERC), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also

be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

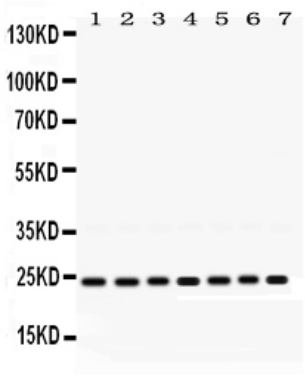
Name	RALA
Synonyms	RAL
Function	Multifunctional GTPase involved in a variety of cellular processes including gene expression, cell migration, cell proliferation, oncogenic transformation and membrane trafficking. Accomplishes its multiple functions by interacting with distinct downstream effectors (PubMed:18756269, PubMed:19306925, PubMed:20005108, PubMed:21822277, PubMed:30500825). Acts as a GTP sensor for GTP-dependent exocytosis of dense core vesicles. The RALA-exocyst complex regulates integrin-dependent membrane raft exocytosis and growth signaling (PubMed:20005108). Key regulator of LPAR1 signaling and competes with GRK2 for binding to LPAR1 thus affecting the signaling properties of the receptor. Required for anchorage- independent proliferation of transformed cells (PubMed:19306925). During mitosis, supports the stabilization and elongation of the intracellular bridge between dividing cells. Cooperates with EXOC2 to recruit other components of the exocyst to the early midbody (PubMed:18756269). During mitosis, also controls mitochondrial fission by recruiting to the mitochondrion RALBP1, which mediates the phosphorylation and activation of DNM1L by the mitotic kinase cyclin B- CDK1 (PubMed:21822277).
Cellular Location	Cell membrane; Lipid-anchor; Cytoplasmic side. Cleavage furrow. Midbody, Midbody ring. Mitochondrion. Note=Predominantly at the cell surface in the absence of LPA. In the presence of LPA, colocalizes with LPAR1 and LPAR2 in endocytic vesicles (PubMed:19306925). May colocalize with CNTRL/centriolin at the midbody ring (PubMed:16213214). However, localization at the midbody at late cytokinesis was not confirmed (PubMed:18756269). Relocalizes to the mitochondrion during mitosis where it regulates mitochondrial fission (PubMed:21822277)

Background

Ras-related protein Ral-A (RalA) is a protein that in humans is encoded by the RALA gene on chromosome 7. This protein is one of two isoforms of the Ral protein, the other being RalB, and part of the Ras GTPase family. As a Ras GTPase, RalA functions as a molecular switch that becomes active when bound to GTP and inactive when bound to GDP. It can be activated by RalGEFs and, in turn, activate effectors in signal transduction pathways leading to biological outcomes. Additionally, Ral proteins have been associated with the progression of several cancers, including bladder cancer and prostate cancer. While the above functions appear to be shared between the two Ral isoforms, their differential subcellular localizations result in their differing involvement in certain biological processes. In particular, RalA is more involved in anchorage-independent cell growth, vesicle trafficking, and cytoskeletal organization. Moreover, RalA specifically interacts with Exo84 and Sec5 to regulate transport of membrane proteins in polarized epithelial cells and GLUT4 to the plasma membrane, as well as mitochondrial fission for cell division.

Images

Anti- RALA Picoband antibody, ABO12480, Western blottingAll lanes: Anti RALA (ABO12480) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Rat Thymus Tissue Lysate at 50ugLane 3: Rat Testis Tissue Lysate at



50ugLane 4: Mouse Thymus Tissue Lysate at 50ugLane 5: Mouse Liver Tissue Lysate at 50ugLane 6: HELA Whole Cell Lysate at 40ugLane 7: MCF-7 Whole Cell Lysate at 40ugPredicted bind size: 24KDObserved bind size: 24KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.