


# Anti-RAPGEF2 antibody ab105110

## 1 图像

### 概述

产品名称	Anti-RAPGEF2抗体
描述	兔多克隆抗体to RAPGEF2
宿主	Rabbit
经测试应用	适用于: IHC-P
种属反应性	与反应: Human 预测可用于: Mouse, Rabbit, Horse, Guinea pig, Dog, Pig, Chimpanzee, Rhesus monkey, Gorilla, Chinese hamster, Elephant 
免疫原	Synthetic peptide, corresponding to a region within the internal sequence amino acids 975-1025 of Human RAPGEF2 (NP_055062.1, GeneID 9693).
阳性对照	Human Anaplastic Thyroid Carcinoma, Breast Carcinoma, Colon Carcinoma, Lung Adenocarcinoma and Ovarian Carcinoma
常规说明	<p>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.</p> <p>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&amp;As</p>

### 性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
纯度	Immunogen affinity purified
纯化说明	Affinity purified using an epitope specific to RAPGEF2 immobilized on solid support.
克隆	多克隆
同种型	IgG

## 应用

### The Abpromise guarantee

**Abpromise™**承诺保证使用ab105110于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IHC-P		1/100 - 1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. ab105110 is likely to work with frozen sections too.

## 靶标

### 功能

Functions as a guanine nucleotide exchange factor (GEF), which activates Rap and Ras family of small GTPases by exchanging bound GDP for free GTP in a cAMP-dependent manner. Serves as a link between cell surface receptors and Rap/Ras GTPases in intracellular signaling cascades. Acts also as an effector for Rap1 by direct association with Rap1-GTP thereby leading to the amplification of Rap1-mediated signaling. Shows weak activity on HRAS. It is controversial whether RAPGEF2 binds cAMP and cGMP (PubMed:23800469, PubMed:10801446) or not (PubMed:10608844, PubMed:10548487, PubMed:11359771). Its binding to ligand-activated beta-1 adrenergic receptor ADRB1 leads to the Ras activation through the G(s)-alpha signaling pathway. Involved in the cAMP-induced Ras and Erk1/2 signaling pathway that leads to sustained inhibition of long term melanogenesis by reducing dendrite extension and melanin synthesis. Provides also inhibitory signals for cell proliferation of melanoma cells and promotes their apoptosis in a cAMP-independent manner. Regulates cAMP-induced neuritogenesis by mediating the Rap1/B-Raf/ERK signaling through a pathway that is independent on both PKA and RAPGEF3/RAPGEF4. Involved in neuron migration and in the formation of the major forebrain fiber connections forming the corpus callosum, the anterior commissure and the hippocampal commissure during brain development. Involved in neuronal growth factor (NGF)-induced sustained activation of Rap1 at late endosomes and in brain-derived neurotrophic factor (BDNF)-induced axon outgrowth of hippocampal neurons. Plays a role in the regulation of embryonic blood vessel formation and in the establishment of basal junction integrity and endothelial barrier function. May be involved in the regulation of the vascular endothelial growth factor receptor KDR and cadherin CDH5 expression at allantois endothelial cell-cell junctions.

### 组织特异性

Expressed in primary neuronal and endocrine cells (at protein level). Highest expression levels in brain. Lower expression levels in heart, kidney, lung, placenta and blood leukocytes.

### 序列相似性

Belongs to the RAPGEF2 family.  
Contains 1 cyclic nucleotide-binding domain.  
Contains 1 N-terminal Ras-GEF domain.  
Contains 1 PDZ (DHR) domain.  
Contains 1 Ras-associating domain.  
Contains 1 Ras-GEF domain.

### 结构域

The Ras-associating domain is necessary for the Rap guanine nucleotide exchange activity. The N-terminal region is necessary for cAMP-binding. The PDZ domain is necessary for its targeting to the cell membrane.

### 翻译后修饰

Ubiquitinated by NEDD4, leading to proteasomal degradation.  
Phosphorylation by PLK2 promotes its activity.

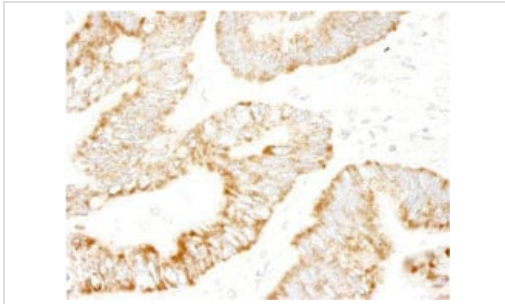
### 细胞定位

Cytoplasm. Cytoplasm, perinuclear region. Cell membrane. Late endosome. Cell junction. Associated with the synaptic plasma membrane. Colocalizes with ADRB1 at the plasma

membrane. Synaptosome. Enriched in synaptic plasma membrane and neuronal cell body. Colocalized with CTNNB1 at cell-cell contacts (By similarity). Localized diffusely in the cytoplasm before neuronal growth factor (NGF) stimulation. Recruited to late endosomes after NGF stimulation. Colocalized with the high affinity nerve growth factor receptor NTRK1 at late endosomes. Translocated to the perinuclear region in a RAP1A-dependent manner. Translocated to the cell membrane.

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## 图片



ab105110, at a 1/250 dilution, staining RAPGEF2 in formalin fixed, paraffin embedded Human lung adenocarcinoma tissue by Immunohistochemistry. Detection: DAB staining

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAPGEF2 antibody (ab105110)

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

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