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RIT1 Rabbit pAb

Catalog # AP99259

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q92963
Other Accession	Q92963
Predicted	Rat, Pig, Human, Mouse, Rabbit, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25145
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human RIT1
Epitope Specificity	141-219/219
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the small GTPase superfamily. Ras family.
SUBUNIT	Interacts with MLLT4, the C-terminal domain of RALGDS and RLF, but not with RIN1 and PIK3CA. RLF binds exclusively to the active GTP-bound form. Strongly interacts with BRAF, but only weakly with RAF1. BARF and RAF1 association is dependent upon the GTP-bound state. Interacts with RGL3 (By similarity).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Plays a crucial role in coupling NGF stimulation to the activation of both EPHB2 and MAPK14 signaling pathways and in NGF-dependent neuronal differentiation. Neuronal activity dramatically increases the concentration of cytosolic Ca2+, which then serves as a second messenger to direct diverse cellular responses. Calmodulin is a primary mediator of Ca2+ signals in the nervous system. Ric, a protein related to the Ras subfamily of small GTPases, has the ability to bind calmodulin. In addition, two Ras-like human proteins, Rin and Rit (Ric-related gene expressed in many tissues), which are 71% and 66% identical to RIC respectively, share related G2 domains with Ric. While most members of the Ras subfamily are plasma membrane-associated and generally require a C-terminal isoprenyl group to bind to the plasma membrane, Rit and Rin lack the recognition signal for C-terminal prenylation. Transiently expressed Rit and Rin are plasma membrane-localized because both proteins contain a C-terminal cluster of basic amino acids, which provides a mechanism for membrane association. Rin binds calmodulin through a C-terminal binding motif. Rit and Ric are widely expressed, whereas expression of Rin is restricted to the neuron system. In conclusion, Rit and Rin define a novel subfamily of Ras-related proteins

Additional Information

Gene ID	6016

Other Names	NS8; RIBB; RIT; ROC1; RGD1559874; RIT1_HUMAN; RIT1; Ras-like protein expressed in many tissues; Ras-like without CAAX protein 1; 3.6.5.2; RIT1_MOUSE; Ras like without CAAX 1; Ric (Drosophila)-like, expressed in many tissues; Ric-like, expressed in many tissues; GTP-binding protein Roc1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	RIT1
Synonyms	RIBB, RIT, ROC1
Function	Plays a crucial role in coupling nerve growth factor (NGF) stimulation to the activation of both EPHB2 and MAPK14 signaling pathways and in NGF-dependent neuronal differentiation (PubMed:15632082). Involved in ELK1 transactivation through the Ras- MAPK signaling cascade that mediates a wide variety of cellular functions, including cell proliferation, survival, and differentiation (PubMed:23791108). Recognized by LZTR1, which mediates its ubiquitination by a BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complex (PubMed:40934300).
Cellular Location	Cell membrane.
Tissue Location	Expressed in many tissues.

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