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Rasgrp1 Rabbit pAb

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Catalog # AP54263

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	O95267
Predicted	Human, Mouse, Rat, Dog, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	90402
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Rasgrp1
Epitope Specificity	701-797/797
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell Membrane, Cytoplasmic, Endoplasmic reticulum and Golgi Apparatus. Found in membrane fraction. Relocalization to the cell membrane upon activation is F-actin-dependent. Translocates to the Golgi in response to phorbol ester or nerve growth factor.
SIMILARITY	Belongs to the RASGRP family. Contains 2 EF-hand domains. Contains 1 N-terminal Ras-GEF domain. Contains 1 phorbol-ester/DAG-type zinc finger. Contains 1 Ras-GEF domain.
SUBUNIT	Forms a signaling complex with DGKZ and HRAS. Interacts with F-actin. Interacts with SKAP1.
Post-translational modifications	Defects in RASGRP1 may contribute to susceptibility to systemic lupus erythematosus (SLE) [MIM:152700]. SLE is a chronic, inflammatory and often febrile multisystemic disorder of connective tissue. It affects principally the skin, joints, kidneys and serosal membranes. SLE is thought to represent a failure of the regulatory mechanisms of the autoimmune system. Note=Aberrantly spliced isoforms and/or diminished levels of RASGRP1 are found in a cohort of SLE patients raising the possibility that dysregulation of this signaling protein contributes to the development of autoimmunity in a subset of SLE patients.
DISEASE	Defects in RASGRP1 may contribute to susceptibility to systemic lupus erythematosus (SLE) [MIM:152700]. SLE is a chronic, inflammatory and often febrile multisystemic disorder of connective tissue. It affects principally the skin, joints, kidneys and serosal membranes. SLE is thought to represent a failure of the regulatory mechanisms of the autoimmune system. Note=Aberrantly spliced isoforms and/or diminished levels of RASGRP1 are found in a cohort of SLE patients raising the possibility that dysregulation of this signaling protein contributes to the development of autoimmunity in a subset of SLE patients.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene is a member of a family of genes characterized by the presence of a Ras superfamily guanine nucleotide exchange factor (GEF) domain. It

functions as a diacylglycerol (DAG)-regulated nucleotide exchange factor specifically activating Ras through the exchange of bound GDP for GTP. It activates the Erk/MAP kinase cascade and regulates T-cells and B-cells development, homeostasis and differentiation. Alternatively spliced transcript variants encoding different isoforms have been identified. Altered expression of the different isoforms of this protein may be a cause of susceptibility to systemic lupus erythematosus (SLE). [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	10125
Other Names	RAS guanyl-releasing protein 1, Calcium and DAG-regulated guanine nucleotide exchange factor II, CalDAG-GEFII, Ras guanyl-releasing protein, RASGRP1, RASGRP
Target/Specificity	Expressed in brain with higher expression in cerebellum, cerebral cortex and amygdala. Expressed in the hematopoietic system. Expressed in T-cells (at protein level).
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=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	RASGRP1
Synonyms	RASGRP
Function	Functions as a calcium- and diacylglycerol (DAG)-regulated nucleotide exchange factor specifically activating Ras through the exchange of bound GDP for GTP (PubMed:15899849, PubMed:23908768, PubMed:27776107, PubMed:29155103). Activates the Erk/MAP kinase cascade (PubMed:15899849). Regulates T-cell/B-cell development, homeostasis and differentiation by coupling T-lymphocyte/B-lymphocyte antigen receptors to Ras (PubMed:10807788, PubMed:12839994, PubMed:27776107, PubMed:29155103). Regulates NK cell cytotoxicity and ITAM-dependent cytokine production by activation of Ras-mediated ERK and JNK pathways (PubMed:19933860). Functions in mast cell degranulation and cytokine secretion, regulating FcERI-evoked allergic responses. May also function in differentiation of other cell types (PubMed:12845332).
Cellular Location	Cytoplasm, cytosol. Cell membrane; Peripheral membrane protein. Golgi apparatus membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein Note=Found both in the cytosol and associated with membranes Relocalization to the cell membrane upon activation is F-actin- dependent. Translocates to the Golgi in response to phorbol ester or nerve growth factor. Localizes to somata and dendrites but not to axons of hippocampal pyramidal cells (By similarity).
Tissue Location	Expressed in brain with higher expression in cerebellum, cerebral cortex and amygdala. Expressed in the hematopoietic system. Expressed in T-cells (at

protein level) Expressed in NK cells (at protein level) (PubMed:19933860)

Background

This gene is a member of a family of genes characterized by the presence of a Ras superfamily guanine nucleotide exchange factor (GEF) domain. It functions as a diacylglycerol (DAG)-regulated nucleotide exchange factor specifically activating Ras through the exchange of bound GDP for GTP. It activates the Erk/MAP kinase cascade and regulates T-cells and B-cells development, homeostasis and differentiation. Alternatively spliced transcript variants encoding different isoforms have been identified. Altered expression of the different isoforms of this protein may be a cause of susceptibility to systemic lupus erythematosus (SLE). [provided by RefSeq, Jul 2008].