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RASGRP4 Rabbit pAb

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Catalog # AP57643

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8TDF6
Reactivity	Rat
Predicted	Dog, Human, Mouse, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	74882
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human RASGRP4
Epitope Specificity	501-600/673
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	Cytoplasm. Cell membrane. Recruited to membranes upon activation by DAG.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a member of the Ras guanyl nucleotide-releasing protein (RasGRP) family of Ras guanine nucleotide exchange factors. It contains a Ras exchange motif, a diacylglycerol-binding domain, and two calcium-binding EF hands. This protein was shown to activate H-Ras in a cation-dependent manner in vitro. Expression of this protein in myeloid cell lines was found to be correlated with elevated level of activated RAS protein, and the RAS activation can be greatly enhanced by phorbol ester treatment, which suggested a role of this protein in diacylglycerol regulated cell signaling pathways. Studies of a mast cell leukemia cell line expressing substantial amounts of abnormal transcripts of this gene indicated that this gene may play an important role in the final stages of mast cell development. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2009]

Additional Information

Gene ID	115727
Other Names	RAS guanyl-releasing protein 4, RASGRP4
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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.

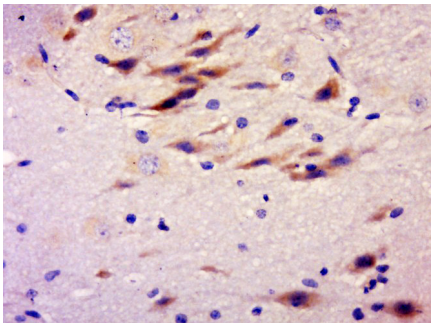
Protein Information

Name	RASGRP4
Function	Functions as a cation- and diacylglycerol (DAG)-regulated nucleotide exchange factor activating Ras through the exchange of bound GDP for GTP (PubMed:11880369, PubMed:11956218, PubMed:12493770, PubMed:18024961). In neutrophils, participates in a phospholipase C-activating N-formyl peptide-activated GPCR (G protein-coupled receptor) signaling pathway by promoting Ras-mediated activation of PIK3CG/PI3Kgamma to promote neutrophil functional responses (By similarity). In CD117(+) dendritic cells and mast cells, participates in an lipopolysaccharide (LPS)-activated signaling pathway that stimulates the production of interferon-gamma and other pro- inflammatory cytokines by natural killer (NK) cells (By similarity). May function in mast cell differentiation (PubMed:11880369, PubMed:11956218, PubMed:12493770, PubMed:18024961). Does not appear to be required for the development of B-cells, DC-cells, T-cells, or NK- cells (By similarity).
Cellular Location	Cytoplasm. Cell membrane Note=Recruited to membranes upon activation by DAG {ECO:0000250|UniProtKB:Q8BTM9}
Tissue Location	Expressed by mast cells and their progenitors (at protein level). Specifically expressed in mononuclear leukocytes Highly expressed in myeloid cells compared to lymphoid cells. Also detected in heart, skeletal muscle, spleen, liver, placenta and lung Not detected in brain. Isoform 1 is the major isoform in normal individuals. Isoform 2 is more significantly expressed in a patient with asthma. Isoform 3 is more significantly expressed in a patient with asthma and a mastocytosis patient.

Background

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Images



Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (RASGRP4) Polyclonal Antibody, Unconjugated (AP57643) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining

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