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RRAGC Rabbit pAb

Catalog # AP99973

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9HB90
Other Accession	Q9HB90
Predicted	Rat, Pig, Human, Mouse, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44224
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human RRAGC
Epitope Specificity	301-399/399
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 GTR/RAG GTP-binding protein family.
SUBUNIT	Forms a heterodimer with RRAGA in a sequence-independent manner. Binds GTP. Interacts with NOL8 and RRAGB.
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 encodes a member of the GTR/RAG GTP-binding protein family. The encoded protein is a monomeric guanine nucleotide-binding protein which forms a heterodimer with RRAGA and RRAGB and is primarily localized to the cytoplasm. The encoded protein promotes intracellular localization of the mTOR complex. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2012].

Additional Information

Gene ID	64121
Other Names	GTR2; LNGODS; LNGOS; RAGC; TIB929; YGR163W; rragc; RRAGC_HUMAN; Rag C; GTPase-interacting protein 2; 3.6.5.-; RRAGC_MOUSE; Ras related GTP binding C; Ras-related GTP binding C
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	RRAGC (HGNC:19902)
Function	Guanine nucleotide-binding protein that plays a crucial role in the cellular response to amino acid availability through regulation of the mTORC1 signaling cascade (PubMed:20381137, PubMed:24095279, PubMed:27234373, PubMed:31601708, PubMed:31601764, PubMed:32612235, PubMed:34071043, PubMed:36697823, PubMed:37057673). Forms heterodimeric Rag complexes with RagA/RRAGA or RagB/RRAGB and cycles between an inactive GTP-bound and an active GDP-bound form: RagC/RRAGC is in its active form when GDP-bound RagC/RRAGC forms a complex with GTP-bound RagA/RRAGA (or RagB/RRAGB) and in an inactive form when GTP-bound RagC/RRAGC heterodimerizes with GDP-bound RagA/RRAGA (or RagB/RRAGB) (PubMed:24095279, PubMed:31601708, PubMed:31601764, PubMed:32868926). In its GDP-bound active form, promotes the recruitment of mTORC1 to the lysosomes and its subsequent activation by the GTPase RHEB (PubMed:20381137, PubMed:24095279, PubMed:27234373, PubMed:32612235, PubMed:36697823). This is a crucial step in the activation of the MTOR signaling cascade by amino acids (PubMed:20381137, PubMed:24095279, PubMed:27234373). Also plays a central role in the non-canonical mTORC1 complex, which acts independently of RHEB and specifically mediates phosphorylation of MiT/TFE factors TFEB and TFE3: GDP-bound RagC/RRAGC mediates recruitment of MiT/TFE factors TFEB and TFE3 (PubMed:32612235, PubMed:36697823).
Cellular Location	Cytoplasm. Nucleus. Lysosome membrane Note=Predominantly cytoplasmic (PubMed:11073942). Recruited to the lysosome surface by the Ragulator complex (PubMed:20381137, PubMed:28935770). May shuttle between the cytoplasm and nucleus, depending on the bound nucleotide state of associated RRAGA (PubMed:11073942).

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