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Rag C Recombinant Rabbit mAb

Catalog # AP100095

Product Information

Application	WB, IHC-P, IHC-F, IF, IP, E
Primary Accession	Q9HB90
Other Accession	Q9HB90
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	44224
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.
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; Ras-related GTP-binding protein C
Dilution	IHC-P=1:50-200,IHC-F=1:50-200,WB=1:500-2000,IF=1:50-200,ELISA=1:5000-10000,IP=1:50-200
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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