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Rag C Polyclonal Antibody

Catalog # AP72175

Product Information

Application	WB
Primary Accession	Q9HB90
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44224

Additional Information

Gene ID	64121
Other Names	RRAGC; Ras-related GTP-binding protein C; Rag C; RagC; GTPase-interacting protein 2; TIB929
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

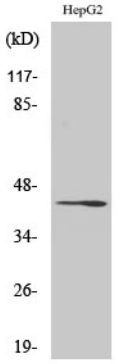
Name	RRAGC (HGNC:19902)
Function	Guanine nucleotide-binding protein that plays a crucial role in the cellular response to amino acid availability through regulation of the mTORC1 signaling cascade (PubMed:20381137, PubMed:24095279, PubMed:27234373, PubMed:31601708, PubMed:31601764, PubMed:32612235, PubMed:34071043, 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).

Background

Guanine nucleotide-binding protein forming heterodimeric Rag complexes required for the amino acid-induced relocalization of mTORC1 to the lysosomes and its subsequent activation by the GTPase RHEB. This is a crucial step in the activation of the TOR signaling cascade by amino acids.

Images



Western Blot analysis of various cells using Rag C Polyclonal Antibody