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RRAGA Antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI16124

Product Information

Application	WB
Primary Accession	Q7L523
Other Accession	NP_006561
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36566

Additional Information

Gene ID	10670
Alias Symbol	RRAGA,
Other Names	Ras-related GTP-binding protein A, Rag A, RagA, Adenovirus E3 14.7 kDa-interacting protein 1, FIP-1, RRAGA (HGNC:16963)
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 &mu, l of distilled water. Final Anti-RRAGA antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.
Precautions	RRAGA Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RRAGA (HGNC:16963)
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:25936802, PubMed:31601708, PubMed:31601764, PubMed:38103557). Forms heterodimeric Rag complexes with RagC/RRAGC or RagD/RRAGD and cycles between an inactive GDP-bound and an active GTP-bound form: RagA/RRAGA is in its active form when GTP-bound RagA/RRAGA forms a complex with GDP-bound RagC/RRAGC (or RagD/RRAGD) and in an inactive form when GDP-bound RagA/RRAGA heterodimerizes with GTP-bound RagC/RRAGC (or RagD/RRAGD) (PubMed:20381137, PubMed:24095279, PubMed:25936802, PubMed:31601708, PubMed:31601764, PubMed:32868926). In its GTP-bound

	active form, promotes the recruitment of mTORC1 to the lysosomes and its subsequent activation by the GTPase RHEB (PubMed:20381137, PubMed:25936802, PubMed:31601708, PubMed:31601764). Involved in the RCC1/Ran-GTPase pathway (PubMed:9394008). May play a direct role in a TNF signaling pathway leading to induction of cell death (PubMed:8995684).
Cellular Location	Cytoplasm. Nucleus. Lysosome membrane Note=Predominantly cytoplasmic (PubMed:8995684, PubMed:9394008) Recruited to the lysosome surface by the Ragulator complex (PubMed:20381137, PubMed:28935770, PubMed:29158492). May shuttle between the cytoplasm and nucleus, depending on the bound nucleotide state (PubMed:8995684, PubMed:9394008). Colocalizes in vivo with adenovirus E3-14.7K mainly to the cytoplasm especially near the nuclear membrane and in discrete foci on or near the plasma membrane (PubMed:8995684).
Tissue Location	Ubiquitously expressed with highest levels of expression in skeletal muscle, heart, and brain

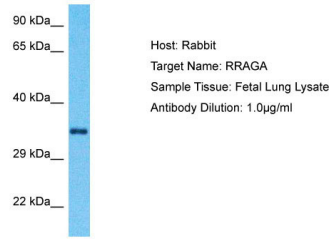
Background

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. Involved in the RCC1/Ran-GTPase pathway. May play a direct role in a TNF-alpha signaling pathway leading to induction of cell death. May alternatively act as a cellular target for adenovirus E3-14.7K, an inhibitor of TNF-alpha functions, thereby affecting cell death.

References

Schuermann A.,et al.J. Biol. Chem. 270:28982-28988(1995).
Li Y.,et al.J. Virol. 71:1576-1582(1997).
Hirose E.,et al.J. Cell Sci. 111:11-21(1998).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Humphray S.J.,et al.Nature 429:369-374(2004).

Images



Host: Rabbit
Target Name: RRAGA
Sample Tissue: Fetal Lung lysates
Antibody Dilution: 1µg/ml

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