

Anti-RagA/B Antibody

Catalog # AP53887

Product Information

Application	WB
Primary Accession	Q7L523
Other Accession	Q5VZM2
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36566

Additional Information

Gene ID	10670
Other Names	RRAGA; Ras-related GTP-binding protein A; Rag A; RagA; Adenovirus E3 14.7 kDa-interacting protein 1; FIP-1; RRAGB; Ras-related GTP-binding protein B; Rag B; RagB
Target/Specificity	Recognizes endogenous levels of RagA/B protein.
Dilution	WB~~1/500 - 1/1000
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	RRAGA (HGNC:16963)
Function	<p>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</p>

RCC1/Ran-GTPase pathway (PubMed:[9394008](#)). May play a direct role in a TNF-alpha 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).

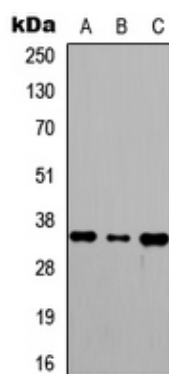
Tissue Location

Ubiquitously expressed with highest levels of expression in skeletal muscle, heart, and brain

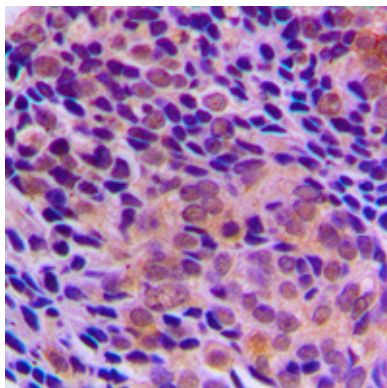
Background

Rabbit polyclonal antibody to RagA/B

Images



Western blot analysis of RagA/B expression in MCF7 (A), HeLa (B), mouse brain (C) whole cell lysates.



Immunohistochemical analysis of RagA/B staining in human prostate cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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