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Phospho-Raptor(S863) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3495a

Specification

Phospho-Raptor(S863) Antibody - Product Information

Application	**WB, IHC-P, DB,E**
Primary Accession	O8N122
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**

Phospho-Raptor(S863) Antibody - Additional Information

Gene ID 57521

Other Names
Regulatory-associated protein of mTOR, Raptor, p150 target of rapamycin (TOR)-scaffold protein, RPTOR, KIAA1303, RAPTOR

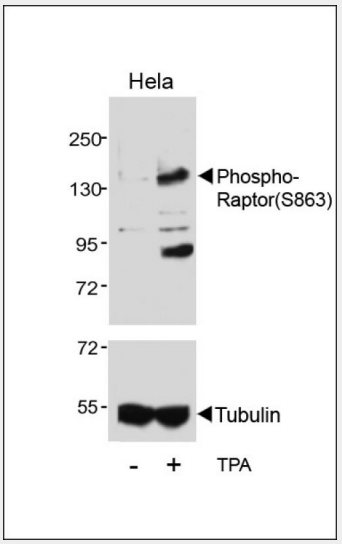
Target/Specificity
This Raptor Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S863 of human Raptor.

Dilution
WB~~1:500
IHC-P~~1:100
DB~~1:500

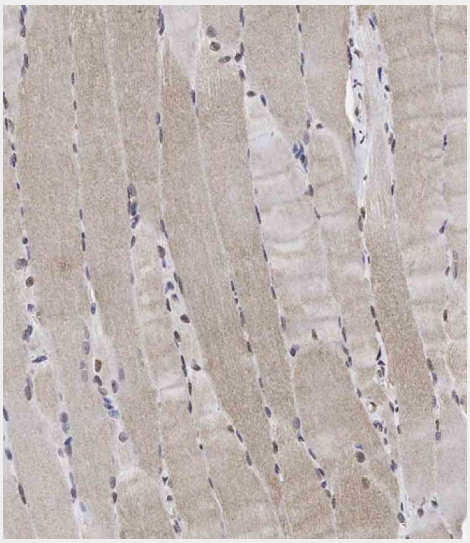
Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions



Western blot analysis of lysates from Hela cell line, untreated or treated with TPA, 200nM , using Phospho-Raptor(S863) Antibody(upper) or tubulin (lower).



Immunohistochemical analysis of AP3495A on paraffin-embedded Human skeletal muscle tissue. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for 1

Phospho-Raptor(S863) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-Raptor(S863) Antibody - Protein Information

Name RPTOR (HGNC:30287)

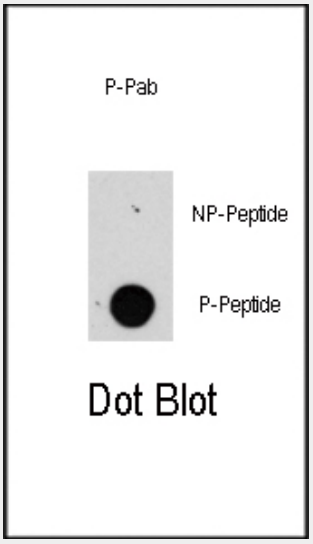
Synonyms KIAA1303, RAPTOR

Function
Involved in the control of the mammalian target of rapamycin complex 1 (mTORC1) activity which regulates cell growth and survival, and autophagy in response to nutrient and hormonal signals; functions as a scaffold for recruiting mTORC1 substrates. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1- TSC2, which leads to the activation of the RHEB GTPase that potently activates the protein kinase activity of mTORC1. Amino acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eiF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Involved in ciliogenesis. mTORC1 complex in excitatory neuronal transmission is required for the prosocial behavior induced by the psychoactive substance lysergic acid diethylamide (LSD) (By similarity).

Cellular Location
Cytoplasm. Lysosome. Cytoplasmic granule. Note=Targeting to lysosomes depends on amino acid availability. In arsenite-stressed cells, accumulates in stress granules when associated with SPAG5 and association with lysosomes is drastically decreased

Tissue Location
Highly expressed in skeletal muscle, and in a lesser extent in brain, lung, small

hour at room temperature. Undiluted CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Dot blot analysis of anti-raptor-pS863 Pab (RB13350) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Phospho-Raptor(S863) Antibody - Background

Raptor participates in the FRAP1 pathway and associates in a near stoichiometric ratio with FRAP1 to form a nutrient-sensitive complex (NSC). It plays a pivotal role as a scaffold protein in the FRAP1-signaling pathway and this interaction is essential for the catalyzed phosphorylation of EIF4EBP1. It has a positive role in nutrient-stimulated signaling to the downstream effector RPS6KB1. Under nutrient-deprived conditions, raptor serves as a negative regulator of FRAP1 kinase activity. Regulation of the interaction with FRAP1 is a critical mechanism by which cells coordinate the rate of cell growth and maintenance of cell size with different environmental conditions.

Phospho-Raptor(S863) Antibody - References

Wang,Y., Circ. Res. 101 (6), 560-569 (2007) Fuchs,B.C., Am. J. Physiol., Cell Physiol. 293 (1), C55-C63 (2007) Olsen,J.V., Cell 127 (3), 635-648 (2006)

intestine, kidney and placenta Isoform 3 is widely expressed, with highest levels in nasal mucosa and pituitary and lowest in spleen.

Phospho-Raptor(S863) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Raptor(S863) Antibody - Citations

- A role for p38 stress-activated protein kinase in regulation of cell growth via TORC1.