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DEPTOR Antibody

Catalog # ASC11797

Product Information

Application	WB, E, IHC-P
Primary Accession	Q8TB45
Other Accession	NP_073620, 189571664
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	46294
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	DEPTOR antibody can be used for detection of DEPTOR by Western blot at 1 - 2 □g/ml. Antibody can also be used for Immunohistochemistry at 5 □g/mL.

Additional Information

Gene ID	64798
Other Names	DEP domain-containing mTOR-interacting protein, DEP domain-containing protein 6, DEPTOR, DEPDC6
Target/Specificity	DEPTOR; DEPTOR antibody is human, mouse and rat reactive. At least three isoforms of DEPTOR are known to exist; this antibody will detect all three isoforms.
Reconstitution & Storage	DEPTOR antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	DEPTOR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DEPTOR {ECO:0000303|PubMed:19446321, ECO:0000312|HGNC:HGNC:22953}
Function	Negative regulator of the mTORC1 and mTORC2 complexes: inhibits the protein kinase activity of MTOR, thereby inactivating both complexes (PubMed:19446321, PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:25936805, PubMed:29382726, PubMed:34519268, PubMed:34519269). DEPTOR inhibits mTORC1 and mTORC2 to induce autophagy (PubMed:22017875, PubMed:22017876, PubMed:22017877). In contrast to AKT1S1/PRAS40, only partially inhibits mTORC1 activity (PubMed:34519268, PubMed:34519269).

Cellular Location	Lysosome membrane. Note=Localizes to the lysosomal membrane when associated with the mTORC1 and mTORC2 complexes.

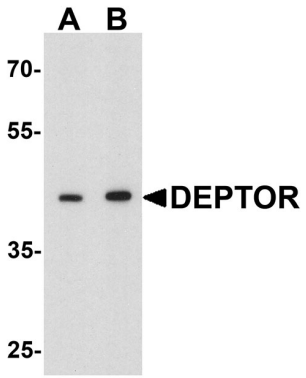
Background

DEPTOR is an mTOR (mammalian target of rapamycin)-interacting protein whose expression is negatively regualted by mTOR complex 1 (mTORC1) and mTORC2 (1). Loss of DEPTOR activates RP6SK1, Akt1, and SGK1, promotes cell growth and survival, and activates mTORC1 and mTORC2 kinase activities. DEPTOR expression is low in most cancers, but is often elevated in multiple myelomas (1). In respons to stimulation by mitogens, DEPTOR is rapidly phosphorylated leading to its ubiquitination and degradation, allowing mTOR to generate an auto-amplification loop to promotes its own full activation (2).

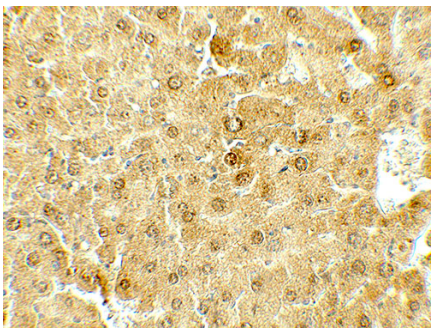
References

Peterson TR, Laplante M, Thoreen CC, et al. DEPTOR is an mTOR inhibitor frequently overexpressed in multiple myeloma cells and required for survival. Cell 2009; 137:873-6.
Duan S, Skaar JR, Kuchay S, et al. mTOR generates an auto-amplification loop by triggering the bTrCP- and CK1a-dependent degradation of DEPTOR. Mol. Cell 2011; 44:317-24.

Images



Western blot analysis of DEPTOR in mouse liver tissue lysate with DEPTOR antibody at (A) 1 and (B) 2 µg/ml.



Immunohistochemistry of DEPTOR in mouse liver tissue with DEPTOR antibody at 5 µg/mL.

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