

Product Name: KD-Validated mTOR Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA01011**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 288.9kDa

Antigen Information

Gene Name	MTOR Mechanistic Target Of Rapamycin Kinase; RAFT1; RAPT1; Rapamycin And FKBP12 Target 1; Mammalian Target Of Rapamycin; FRAP1; FRAP2; FRAP; FK506-Binding Protein 12-Rapamycin Complex-Associated Protein 1; Mechanistic Target Of Rapamycin (Serine/Threonine Kinase); FK506 Binding Protein 12-Rapamycin Associated Protein 2; FKBP12-Rapamycin Complex-Associated Protein 1; Serine/Threonine-Protein Kinase MTOR; Rapamycin Associated Protein FRAP2; FKBP-Rapamycin Associated Protein; Mechanistic Target Of Rapamycin; Rapamycin Target Protein 1; FLJ44809; DJ576K7.1 (FK506 Binding Protein 12-Rapamycin Associated Protein 1); FK506 Binding Protein 12-Rapamycin Associated Protein 1; FKBP12-Rapamycin Complex-Associated Protein; Rapamycin Target Protein; EC 2.7.11.1; MTOR; SKS
Alternative Names	

Gene ID	2475.0
SwissProt ID	P42345
Immunogen	A synthesized peptide derived from human mTOR

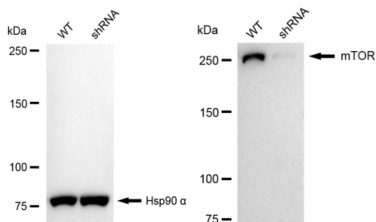
Background

The protein encoded by this gene belongs to a family of phosphatidylinositol kinase-related kinases. These kinases mediate cellular responses to stresses such as DNA damage and nutrient deprivation. This kinase is a component of two distinct complexes, mTORC1, which controls protein synthesis, cell growth and proliferation, and mTORC2, which is a regulator of the actin cytoskeleton, and promotes cell survival and cell cycle progression. This protein acts as the target for the cell-cycle arrest and immunosuppressive effects of the FKBP12-rapamycin complex. Inhibitors of mTOR are used in organ transplants as immunosuppressants, and are being evaluated for their therapeutic potential in SARS-CoV-2 infections. Mutations in this gene are associated with Smith-Kingsmore syndrome and somatic focal cortical dysplasia type II. The ANGPTL7 gene is located in an intron of this gene. [provided by RefSeq, Aug 2020]

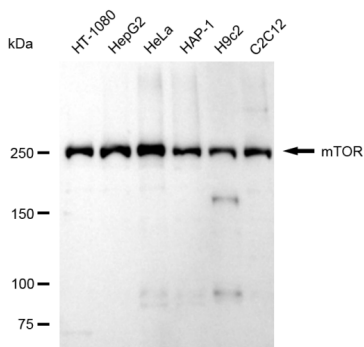
Research Area

Cell Biology, Epigenetics and Nuclear Signaling, Cancer, Cardiovascular, Metabolism, Neuroscience

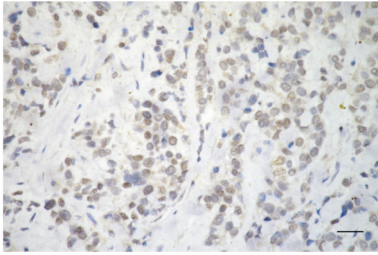
Image Data



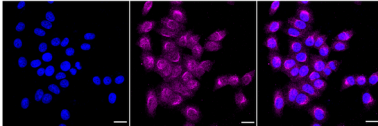
Western blotting analysis using mTOR antibody (KVA01011). mTOR expression in wild type (WT) and mTOR shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with mTOR antibody (KVA01011, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



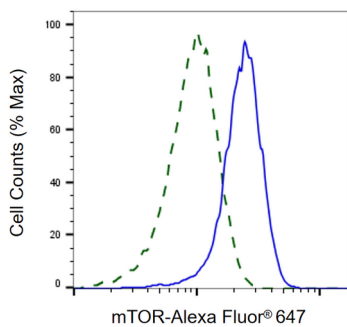
Western blotting analysis using mTOR antibody (KVA01011). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with mTOR antibody (KVA01011, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



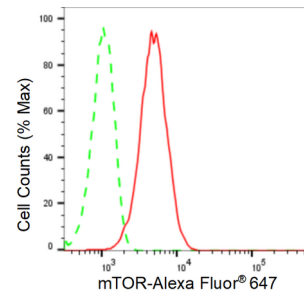
Immunohistochemistry was performed on paraffin-embedded human breast carcinoma using mTOR antibody (KVA01011, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 μm.



Immunocytochemical staining of HepG2 cells with mTOR antibody (KVA01011, 1:1,000). Nuclei were stained blue with DAPI; mTOR was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser intensity and smart gain: High. Scale bar: 20 μm.



Validation of mTOR knockdown using flow cytometry. Wild-type (WT, Blue) and knockdown (KD, Green) HeLa cells were stained with mTOR antibody (KVA01011, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of mTOR expression in HepG2 cells using mTOR antibody (KVA01011, 1:2,000). Green, isotype control; red, mTOR.