

Datasheet for ABIN129663

anti-MTOR antibody (AA 2430-2460)

3 Images



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Overview

Quantity:	100 µg
Target:	MTOR (mTOR)
Binding Specificity:	AA 2430-2460
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA

Product Details

Purpose:	mTOR Antibody
Immunogen:	<p>Immunogen: This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near amino acids 2430-2460 of human mTOR.</p> <p>Immunogen Type: Conjugated Peptide</p>
Isotype:	IgG
Cross-Reactivity (Details):	Reactivity occurs with both phosphorylated and non-phosphorylated forms of mTOR at S2448 from human derived tissues and cells.
Characteristics:	<p>Synonyms: rabbit anti-mTOR pS2448 antibody, FKBP12 rapamycin complex associated protein antibody, Serine/threonine-protein kinase mTOR, FK506-binding protein 12-rapamycin complex-associated protein 1, Mammalian target of rapamycin, mTOR, Mechanistic target of rapamycin, Rapamycin and FKBP12 target 1, Rapamycin target protein 1, FRAP, FRAP1, FRAP2, RAFT1,</p>

Product Details

RAPT1

Purification: This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase.

Sterility: Sterile filtered

Target Details

Target: MTOR (mTOR)

Alternative Name: MTOR ([mTOR Products](#))

Background: Background: Mammalian target of rapamycin (mTOR) is a serine and threonine protein kinase that regulates numerous cellular functions, in particular, the initiation of protein translation. Rapamycin is a natural product macrolide that induces G₁ growth arrest in yeast, Drosophila, and mammalian cells. mTOR has a long list of synonyms including FK506 binding protein12 - rapamycin associated protein 1, FK506 binding protein12 - rapamycin associated protein 2, FRAP1, FRAP2, RAFT1, RAPT1 and/or FKBP12-rapamycin associated protein (FRAP). mTOR is one of a family of proteins involved in cell cycle progression, DNA recombination, and DNA damage detection. In rat, mTOR is a 245-kD protein referred to as RAFT1 with significant homology to the Saccharomyces cerevisiae protein TOR1 and has been shown to associate with the immunophilin FKBP12 in a rapamycin-dependent fashion. The FKBP12-rapamycin complex is known to inhibit progression through the G₁ cell cycle stage by interfering with mitogenic signaling pathways involved in G₁ progression in several cell types, as well as in yeast. The binding of mTOR to FKBP12-rapamycin correlates with the ability of these ligands to inhibit cell cycle progression.

Gene ID: 2475, 1169735

UniProt: [P42345](#)

Pathways: [PI3K-Akt Signaling](#), [RTK Signaling](#), [AMPK Signaling](#), [Interferon-gamma Pathway](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Regulation of Actin Filament Polymerization](#), [Regulation of Muscle Cell Differentiation](#), [Regulation of Cell Size](#), [Skeletal Muscle Fiber Development](#), [Regulation of Carbohydrate Metabolic Process](#), [Autophagy](#), [CXCR4-mediated Signaling Events](#), [BCR Signaling](#), [Warburg Effect](#)

Application Details

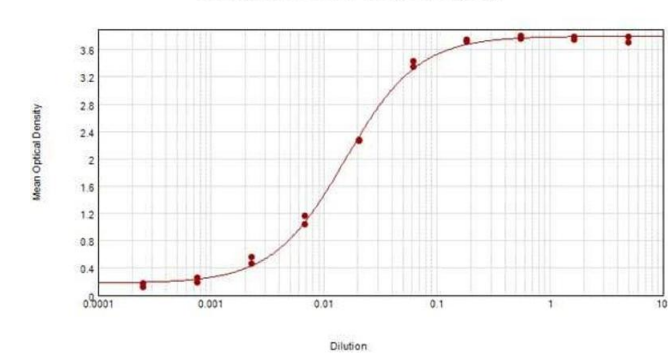
Application Notes:	<p>Application Note: This affinity purified mTOR antibody has been tested for use in ELISA and western blotting. ELISA data demonstrate reactivity against both phosphorylated and non-phosphorylated mTOR at S2448 and western blotting shows a band at approximately 250 kDa. Reactivity in other immunoassays is unknown.</p> <p>Western Blot Dilution: 1:250 - 1:2,000</p> <p>ELISA Dilution: 1:50,000 - 1:100,000</p> <p>Other: User Optimized</p>
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Restrictions:	For Research Use only
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Handling

Format:	Liquid
Concentration:	0.9 mg/mL
Buffer:	<p>Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2</p> <p>Stabilizer: None</p> <p>Preservative: 0.01 % (w/v) Sodium Azide</p>
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C, -20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

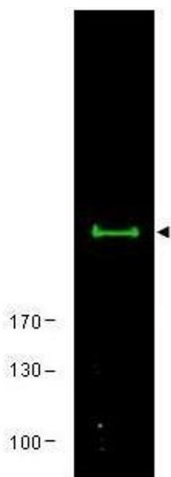
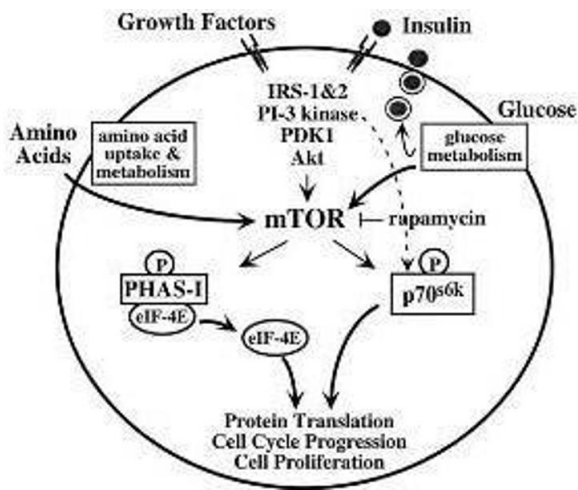
Anti-mTOR Sensitivity



ELISA

Image 1. ELISA results of purified Rabbit anti-mTOR Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) and TMB ELISA Peroxidase Substrate .

Image 2. Diagram of Metabolic and autocrine regulation of the mTOR pathway by b-cells.



Western Blotting

Image 3. Western blot using Affinity Purified anti-mTOR antibody shows detection of a band ~245 kDa corresponding to human mTor (arrowhead). Approximately 30 µg of HEK293 cell lysate was separated by 4-8% SDS-PAGE and transferred onto nitrocellulose. After blocking, the membrane was probed with the primary antibody diluted to 1:650 for 2h at RT. The membrane was washed and reacted with a 1:10,000 dilution of 800 conjugated Gt-a-Rabbit IgG [H&L] MX for 45 min at room temperature. 800 fluorescence image was captured using the Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar

results.