Datasheet for ABIN676403

anti-MTOR antibody (AA 2436-2492)

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Overview

Quantity:	100 µL
Target:	MTOR (mTOR)
Binding Specificity:	AA 2436-2492
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MTOR antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Flow Cytometry (FACS), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunofluorescence (Cultured Cells) (IF (cc)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human mTOR
Isotype:	IgG
Cross-Reactivity:	Chicken, Cow, Fish, Human, Mouse, Rat
Predicted Reactivity:	Dog,Cow,Sheep,Horse
Purification:	Purified by Protein A.

Target Details

Target:	MTOR (mTOR)

Target Details

Alternative Name:	Mtor/Frap (mTOR Products)
Background:	Synonyms: Serine/threonine-protein kinase mTOR, FK506-binding protein 12-rapamycin complex-associated protein 1, FKBP12-rapamycin complex-associated protein, Mammalian target of rapamycin, mTOR, Mechanistic target of rapamycin, Rapamycin and FKBP12 target 1, Rapamycin target protein 1, MTOR, FRAP, FRAP1, FRAP2, RAFT1, RAPT1 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 protein acts as the target for the cell-cycle arrest and immunosuppressive effects of the FKBP12-rapamycin complex. The ANGPTL7 gene is located in an intron of this gene. [provided by RefSeq, Sep 2008]
Gene ID:	2475
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:	IHC-P 1:100-500 IF(IHC-P) 1:50-200
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 µg/µL
Buffer:	0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

Handling

Storage:	4 °C,-20 °C
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Expiry Date:	12 months

Publications

Product cited in:

Wang, Sun, Han, Li, Ge, Zhao, De Felici, Shen, Cheng: "Protective effects of melatonin against nicotine-induced disorder of mouse early folliculogenesis." in: **Aging**, Vol. 10, Issue 3, pp. 463-480, (2019) (PubMed).

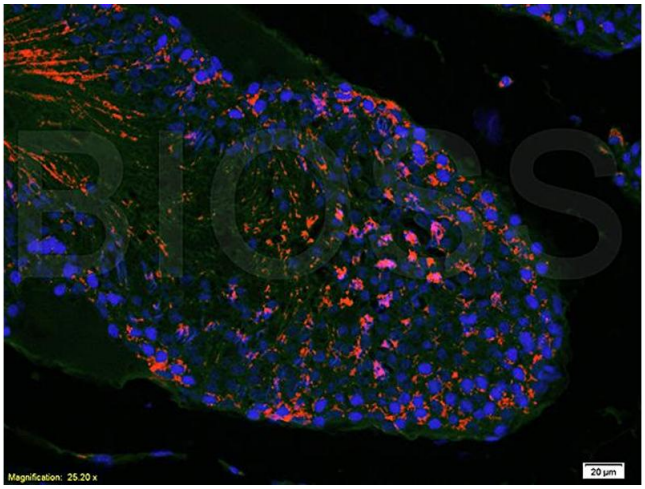
Sun, Li, Zhao, Wang, Liu, Shao, Xue, Xing: "Synergistic effect of copper and arsenic upon oxidative stress, inflammation and autophagy alterations in brain tissues of Gallus gallus." in: **Journal of inorganic biochemistry**, Vol. 178, pp. 54-62, (2018) (PubMed).

Li, Qiu, Liu, Wang, Hu, Gan, Wang: "Long-term thermal manipulation in the late incubation period can inhibit breast muscle development by activating endoplasmic reticulum stress in duck (Anasplatyrhynchos domestica)." in: **Journal of thermal biology**, Vol. 70, Issue Pt B, pp. 37-45, (2017) (PubMed).

Tian, Liu, Qu: "Role of endoplasmic reticulum stress on cisplatin resistance in ovarian carcinoma." in: **Oncology letters**, Vol. 13, Issue 3, pp. 1437-1443, (2017) (PubMed).

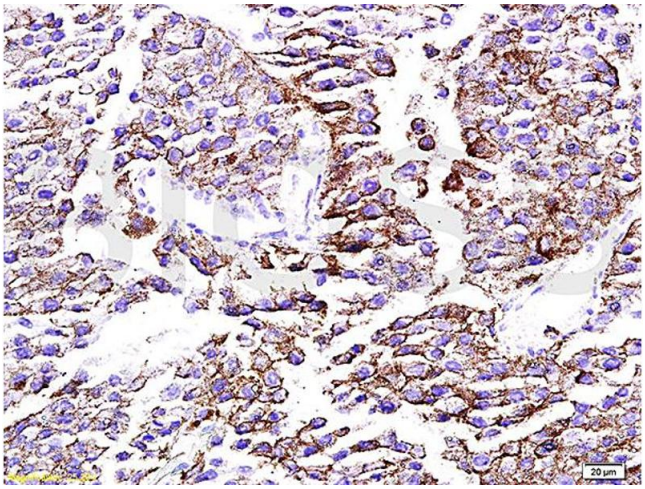
There are more publications referencing this product on: Product page

Images



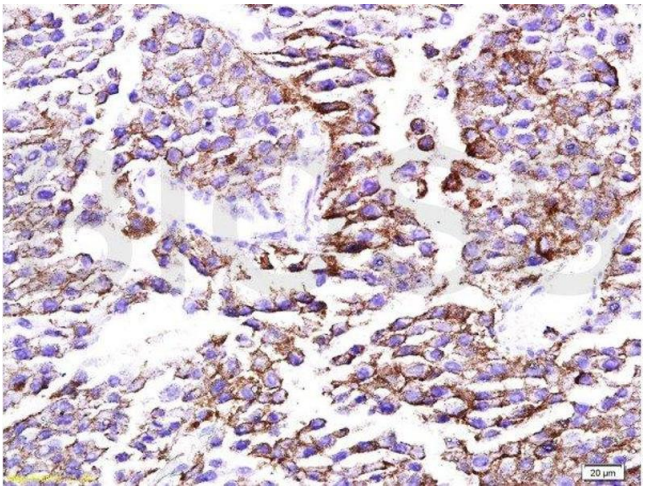
Immunofluorescence

Image 1. Formalin-fixed and paraffin embedded mouse melanoma tissue labeled with Anti-mTOR Polyclonal Antibody, Unconjugated (ABIN676403) at 1:200 followed by conjugation to the secondary antibody and DAB staining



Immunohistochemistry

Image 2. Formalin-fixed and paraffin embedded rat testis tissue labeled with Anti-mTOR Polyclonal Antibody, Unconjugated (ABIN676403) at 1:200 followed by conjugation to the secondary antibody, Goat Anti-Rabbit IgG, PE conjugated and DAPI staining



Immunohistochemistry (Paraffin-embedded Sections)

Image 3. Formalin-fixed and paraffin embedded mouse melanoma tissue labeled with Anti-mTOR Polyclonal Antibody, Unconjugated at 1:200 followed by conjugation to the secondary antibody and DAB staining

Validation report #029761 for Western Blotting (WB)

Successfully validated (Western Blotting (WB))

by Alamo Laboratories Inc

Report Number: 029761

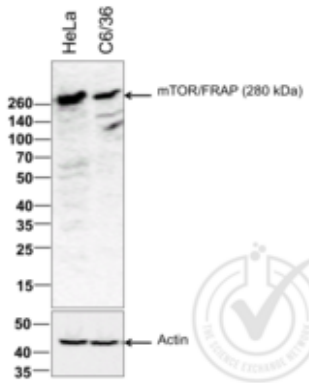
Date: Jul 03 2014

Lot Number:	131209
Method validated:	Western Blotting (WB)
Positive Control:	HeLa cells
Negative Control:	c6/36 mosquito cells (non-reactive species)
Notes:	A strong band was observed in the positive control sample at the correct molecular weight. Multiple faint bands were also observed in the positive sample, but these bands did not represent a significant background signal. A band at the correct molecular weight was also observed in the negative control; however, it may be impossible to find a true negative control for this antigen.
Primary Antibody:	- Antigen: Mechanistic Target of Rapamycin (serine/threonine Kinase) (FRAP1) (1:200 dilution) - Catalog number: ABIN676403 - Supplier: Bioss - Supplier catalog number: bs-1992R - Lot number: 131209
Secondary Antibody:	- Antigen: Goat Anti-Rabbit IgG (H + L)-HRP Conjugate - Supplier: Bio-Rad - Catalog number: #170-6515 - Lot number: L170-6515
Controls:	• Positive control: HeLa cell extract • Negative control: c6/36 Mosquito cell extract
Protocol:	• Total protein extracts were boiled in 1X SDS Sample Buffer containing 1% SDS and 1.25% β-mercaptoethanol at 95°C for 5 min prior to loading. • 20 µg of boiled extracts were loaded and resolved on 8-16% SDS-polyacrylamide gel. • The Thermo Scientific - Spectra Multicolor Broad Range (Cat # 26634) were used as molecular mass markers. • Proteins were then transferred onto PVDF membrane by wet transfer and protein transfer was confirmed with Ponceau-S staining. • The PVDF membrane was incubated with 25 mL of blocking buffer [Tris Buffered Saline, pH 7.4 plus 0.1% TW20 (TBST)] containing 5% (W/V) BSA at room temperature for 1 h. • The membrane was rinsed with TBST once. • The membrane was immersed with the protein side up in the primary antibody solution (FRAP1; 1:200) in TBST containing 5% (W/V) BSA and incubated for 16 h at 4°C.

- The membrane was rinsed in TBST thrice for 5 min each.
- The membrane was incubated in the HRP-conjugated secondary antibody solution (Goat anti-rabbit IgG-HRP; 1:20,000) in TBST containing 5% (W/V) BSA and incubated for 1 h at room temperature (~26°C) with gentle agitation.
- The membrane was rinsed thrice TBST thrice for 5 min each.
- The membrane was rinsed in TBS twice for 30 s each.
- Signals were detected with ECL-2 Substrate. The blot was scanned for 300 s.
- The membrane was rinsed three times TBST.
- Incubated in Acidic Glycine Stripping Buffer at room temperature with gentle agitation for 3 times, 10 min each.
- The membrane was washed in TBST 2 times for 10 min each.
- Repeated Steps 5-12 with the loading control antibody (anti-Actin; 1:6,000) and its matching secondary antibody (Goat anti-rabbit IgG-HRP; 1:20,000).

Experimental Notes: - No experimental challenges noted.

Image for Validation report #029761



Validation image no. 1 for anti-Mechanistic Target of Rapamycin (serine/threonine Kinase) (mTOR) (AA 2436-2492) antibody (ABIN676403)

Figure 1. Western blot of lysates from HeLa cells (Lane 1) and c6/36 cells (Lane 2) probed with anti-mTOR (upper panel) or with anti-Actin for loading control (lower panel).