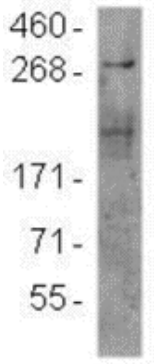
Anti-Human/Mouse mTOR Purified

Catalog Number: 14-2190
For Research Use Only. Not for use in diagnostic procedures.



Immunoblotting of reduced cell lysates prepared from Jurkat cell line with 5 ug/mL of Anti-Human/Mouse mTOR Purified. Bands were visualized using Anti-Mouse IgG HRP.

Product Information

Contents: Anti-Human/Mouse mTOR Purified
REF **Catalog Number:** 14-2190
Clone: F11
Concentration: 0.5 mg/mL
Host/Isotype: Mouse IgG1, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C.
LOT **Batch Code:** Refer to Vial
Use By: Refer to Vial
Caution, contains Azide

Description

This F11 monoclonal antibody reacts with human, mouse, and rat mammalian target of rapamycin (mTOR). This 289-kDa serine/threonine kinase is activated via phosphorylation at Ser2448 by the PI3K/Akt signaling pathway in response to growth factors, energy, nutrients, and stress. mTOR is highly conserved amongst eukaryotes and constitutively expressed in immune (e.g. T, B, NK, dendritic cells, mast cells, and neutrophils) and non-immune tissues (e.g. heart). mTOR exists as a member of two distinct complexes, mTORC1 and mTORC2, which have differing sensitivities to rapamycin and phosphorylation targets. Rapamycin inhibits mTOR activity by binding FKBP12, which causes dissociation of mTORC1 and mTORC2. This molecule plays a critical role in cell metabolism, survival, dendritic cell maturation and activation, and protein synthesis. Deregulation of mTOR has been implicated in a variety of cancers. Studies have also suggested a role for mTOR in Foxp3 expression and regulatory T cell differentiation.

Applications Reported

This F11 antibody has been reported for use in immunoprecipitation, immunoblotting (WB), and immunohistology staining of paraffin embedded tissue sections.

Applications Tested

This F11 antibody has been tested by western blot analysis of reduced cell lysates prepared from Jurkat cells. This can be used at 1-5 ug/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Thomson AW, Turnquist HR, Raimondi G. Immunoregulatory functions of mTOR inhibition. Nat Rev Immunol. 2009 May;9(5):324-37.

Delgoffe GM, Powell JD. mTOR: taking cues from the immune microenvironment. Immunology. 2009 Aug;127(4):459-65.

Nemazanyy I, Breus O, Gout I, Filonenko V, Panasyuk G. Generation and characterization of monoclonal antibodies to mTOR kinase. Hybridoma (Larchmt). 2008 Oct;27(5):395-9. (**F11**, WB, IP, IHC Pubmed)

Sabers CJ, Martin MM, Brunn GJ, Williams JM, Dumont FJ, Wiederrecht G, Abraham RT. Isolation of a protein target of the FKBP12-rapamycin complex in mammalian cells. J Biol Chem. 1995 Jan 13;270(2):815-22.

Related Products

14-4714 Mouse IgG1 K Isotype Control Purified (P3.6.2.8.1)

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