mTOR (30): sc-517464

**BACKGROUND**

The PIK-related kinases include ATM, DNA-PKcs and mTOR. The ATM gene is mutated in the autosomal recessive disorder ataxia telangiectasia (AT) that is characterized by cerebellar degeneration and the appearance of dilated blood vessels in the conjunctivae of the eyes. AT cells are hypersensitive to ionizing radiation, impaired in mediating the inhibition of DNA synthesis and they display delays in p53 induction. DNA-PK is a heterotrimeric DNA binding enzyme that is composed of a large subunit, DNA-PKcs, and two smaller subunits collectively known as Ku. The loss of DNA-PK leads to defects in DSB repair and V(D)J recombination. mTOR, also known as FRAP, can autophosphorylate on serine and bind to rapamycin/FKBP. mTOR is also an upstream regulator of S6 kinase and has been implicated in the regulation of p27 and p21 expression. mTOR autophosphorylates at Ser 2481 under translationally repressive conditions. Phosphorylation of mTOR at Ser 2448 is mediated by p70S6 kinase.

**SOURCE**

mTOR (30) is a mouse monoclonal antibody raised against amino acids 185-290 of mTOR of rat origin.

**PRODUCT**

Each vial contains 200 µg IgG1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. mTOR (30) is available conjugated to agarose (sc-517464 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-517464 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**APPLICATIONS**

mTOR (30) is recommended for detection of mTOR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml) origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:500). Suitable for use as control antibody for mTOR siRNA (h): sc-35409, mTOR siRNA (m): sc-35410, mTOR shRNA Plasmid (h): sc-35409-SH, mTOR shRNA Plasmid (m): sc-35410-SH, mTOR shRNA (h) Lentiviral Particles: sc-35409-V and mTOR shRNA (m) Lentiviral Particles: sc-35410-V.

Molecular Weight (predicted) of mTOR: 289 kDa. Molecular Weight (observed) of mTOR: 211-245 kDa. Positive Controls: CCRF-CEM cell lysate: sc-2225, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG, BP-HRP: sc-516132 or m-IgG, BP-HRP (Cruz Marker); sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-216241 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG, BP-FITC: sc-516185 or m-IgG, BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.