**BACKGROUND**

The PIK-related kinases include Atm, DNA-PKδs, 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-PKδs, 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 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 2441 under translationally repressive conditions. Phosphorylation of mTOR at Ser 2441 is a key event in the regulation of cellular growth and metabolism.

**SOURCE**

p-mTOR (59Ser 2448) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 2448 phosphorylated mTOR of human origin.

**PRODUCT**

Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

p-mTOR (59Ser 2448) is recommended for detection of Ser 2448 phosphorylated 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 of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:500-1:5000), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:500-1:5000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.