

mTOR (1920-2185): sc-4457 WB

BACKGROUND

The phosphatidylinositol kinase (PIK) family members fall into two distinct subgroups. The first subgroup contains proteins such as the PI 3- and PI 4-kinases and the second group comprises the PIK-related kinases. The PIK-related kinases include Atm, PKsc and mTOR. These proteins have in common a region of homology at their carboxy termini that is not present in the PI 3- and PI 4-kinases. All of the members of the PIK-related kinases are also more than 270 kDa. The Atm gene is mutated in the autosomal recessive disorder ataxia telangiectasia (AT), which is characterized by cerebellar degeneration (ataxia) and the appearance of dilated blood vessels (telangiectases) in the conjunctivae of the eyes. AT cells are hypersensitive to ionizing radiation, impaired in mediating the inhibition of DNA synthesis and 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 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.

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SOURCE

mTOR (1920-2185) is expressed in *E. coli* as a 56 kDa tagged fusion protein corresponding to amino acids 1920-2185 of mTOR of human origin.

PRODUCT

mTOR (1920-2185) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

mTOR (1920-2185) is suitable as a Western blotting control for sc-8319.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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