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DATA SHEET

Mouse Anti-mTOR Phospho S2448 [59.Ser 2448]: MC0509, MC0509RTU7

Intended Use: For Research Use Only

Description: 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 Ser2481 under translationally repressive conditions. Phosphorylation of mTOR at Ser2448 is mediated by p70S6 kinase.

Specifications:

Clone:	59.Ser 2448
Source:	Mouse
Isotype:	IgG1k
Reactivity:	Human, mouse, rat
Immunogen:	Amino acid sequence containing phosphorylated Ser 2448 of human mTOR
Localization:	Nucleus
Formulation:	Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
Storage:	Store at 2°- 8°C
Applications:	IHC, ELISA, ICC/IF, IP, WB

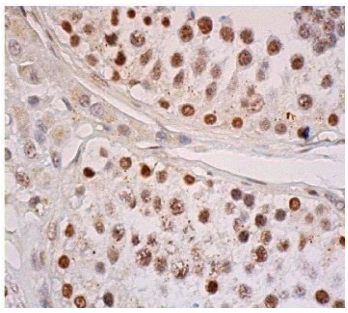
Package:

Description	Catalog No.	Size
mTOR Phospho S2448 Concentrated	MC0509	1 ml
mTOR Phospho S2448 Prediluted	MC0509RTU7	7 ml

IHC Procedure*:

Positive Control Tissue:	Breast carcinoma, testis
Concentrated Dilution:	50-200
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes @ RT
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human testis stained with anti-mTOR pS2448 showing nuclear staining of cells in seminiferous ducts, Leydig cells

References:

1. Role of the mesenchymal stem cells derived from adipose tissue in changing the rate of breast cancer cell proliferation and autophagy, in vitro and in vivo. Adelipour M, et al. Iran J Basic Med Sci 24:98-107, 2021.
2. Rapamycin promotes endothelial-mesenchymal transition during stress-induced premature senescence through the activation of autophagy. Sasaki N, et al. Cell Commun Signal 18:43, 2020.

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