

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse RPTOR in Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 514208
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human RPTOR Lys77-Gln230 Accession # Q8N122
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	HeLa human cervical epithelial carcinoma cell line and C2C12 mouse myoblast cell line fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005)

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

RPTOR (Raptor) is a 150 kDa component of the cytosolic mammalian target of Rapamycin complex 1 (mTORC1) which also contains mTOR and GBL proteins. mTORC1 plays a dominant role in cell cycle regulation in response to metabolic conditions. The interaction of RPTOR with the kinase mTOR is stabilized under conditions of nutrient deprivation and energy stress, leading to inhibition of mTOR and cell cycle arrest. RPTOR contains multiple Ser and Thr residues whose phosphorylation regulates the activation status of mTOR. RPTOR is critical for the response of skeletal muscle and adipose tissue to insulin. It contains three RNC blocks (aa 48-511), three HEAT repeats (aa 550-667), and seven C-terminal WD40 domains (aa 1020-1335). Within aa 77-230, human RPTOR shares 100% aa sequence identity with mouse and rat RPTOR.

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