

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse PRAS40 when phosphorylated at T246
Source	Monoclonal Mouse IgG _{2A} Clone # 760502
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Phosphopeptide containing the human PRAS40 T246 site
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

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. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PRAS40 (Proline-rich AKT1 substrate 1; also Akt1S1 and p39) is a 40-42 kDa cytoplasmic phosphoprotein that lacks generally recognized structural motifs. It is widely expressed and is considered to be key regulator of mTORC1 (mTOR plus raptor and GβL), a complex through which Akt signals into the cell. Through phosphorylation, mTORC1 activity is upregulated by PRAS40. In particular, nonphosphorylated PRAS40 binds to and serves as a negative regulator of mTORC1 activity. Upon Insulin signaling, PRAS40 is phosphorylated on Thr246, Ser221 and Ser183. This causes it to bind 14-3-3 and results in its dissociation from mTORC1, freeing up mTOR to regulate (positively or negatively) protein synthesis. Human PRAS40 is 256 amino acids (aa) in length. It contains one extended Pro-rich region (aa 35-96) plus at least nine utilized Ser/Thr phosphorylation sites. There is one alternative start site at Met131. Over aa 119-256, human PRAS40 shares 93% aa identity with mouse PRAS40.

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