

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat PP2Cα/PPM1A in Western blots. No cross-reactivity with recombinant human PP2Cβ, ILKAP/PP2Cδ, or PP2Cγ is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 498922
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human PP2Cα/PPM1A Met1-Gly324 Accession # P35813
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 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.

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

Protein phosphatase 2C alpha, also called PP2Cα, Protein Phosphatase, Magnesium-dependent type 1A, and PPM1A, dephosphorylates proteins with some preference for phospho-threonine over phospho-serine residues (1). It is insensitive to the PP1 and PP2a inhibitors such as okadaic acid, (2) but has an absolute requirement for either magnesium or manganese ions (3) and can be activated by unsaturated fatty acids such as arachidonic and oleic acids (4). Overexpression of PP2Cα causes G2/M cell cycle arrest and apoptosis that has been associated with the activation of p53 (5). Dephosphorylation of proteins in the nucleus by PP2Cα is suspected to play a role in terminating or reducing the sensitivity of the responses to SMADS (6) and stress-activated proteins such as p38 and JNK (7).

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