Datasheet for ABIN5008909

anti-PKMYT1 antibody (pThr495) (AbBy Fluor® 680)

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Overview

Quantity:	100 µL
Target:	PKMYT1
Binding Specificity:	pThr495
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PKMYT1 antibody is conjugated to AbBy Fluor® 680
Application:	Western Blotting (WB)

Product Details

Immunogen:	KLH conjugated synthetic phosphopeptide derived from human PKMYT1 around the phosphorylation site of Thr495
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Purification:	Purified by Protein A.

Target Details

Target:	PKMYT1
Alternative Name:	PKMYT1 (PKMYT1 Products)
Background:	Synonyms: Serine/threonine-protein kinase mTOR, FK506-binding protein 12-rapamycin

Target Details

	complex-associated protein 1, FKBP12-rapamycin complex-associated protein, Mammalian target of rapamycin, mTOR, Mechanistic target of rapamycin, Rapamycin and FKBP12 target 1, Rapamycin target protein 1, MTOR, FRAP, FRAP1, FRAP2, RAFT1, RAPT1 Background: Serine/threonine protein kinase which is a central regulator of cellular metabolism, growth and survival in response to hormones, growth factors, nutrients, energy and stress signals. MTOR directly or indirectly regulates the phosphorylation of at least 800 proteins. Functions as part of 2 structurally and functionally distinct signaling complexes mTORC1 and mTORC2 (mTOR complex 1 and 2). Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. This includes phosphorylation of EIF4EBP1 and release of its inhibition toward the elongation initiation factor 4E (eiF4E). Moreover, phosphorylates and activates RPS6KB1 and RPS6KB2 that promote protein synthesis by modulating the activity of their downstream targets including ribosomal protein S6, eukaryotic translation initiation factor EIF4B, and the inhibitor of translation initiation PDCD4. Stimulates the pyrimidine biosynthesis pathway, both by acute regulation through RPS6KB1-mediated phosphorylation of the biosynthetic enzyme CAD, and delayed regulation, through transcriptional enhancement of the pentose phosphate pathway which produces 5-phosphoribosyl-1-pyrophosphate (PRPP), an allosteric activator of CAD at a later step in synthesis, this function is dependent on the mTORC1 complex. Regulates ribosome synthesis by activating RNA polymerase III-dependent transcription through phosphorylation and inhibition of MAF1 an RNA polymerase III-repressor. In parallel to protein synthesis, also regulates lipid synthesis through SREBF1/SREBP1 and LPIN1. To maintain energy homeostasis mTORC1 may also regulate mitochondrial biogenesis through regulation of PPARGC1A. mTORC1 also negatively regulates autophagy through phosphorylation of ULK1. Under nutrient sufficiency, phosphorylates ULK1 at 'Ser-758', disrupting the interaction with AMPK and preventing activation of ULK1.
Gene ID:	2475
Pathways:	Mitotic G1-G1/S Phases, M Phase

Application Details

Application Notes:	IF(IHC-P) 1:50-200
Restrictions:	For Research Use only

Handling

Format:	Liquid

Handling

Concentration:	1 µg/µL
Buffer:	Aqueous buffered solution containing 0.01M TBS (pH 7.4) with 1 % BSA, 0.03 % Proclin300 and 50 % Glycerol.
Storage:	-20 °C
Storage Comment:	Store at -20°C. Aliquot into multiple vials to avoid repeated freeze-thaw cycles.
Expiry Date:	12 months