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MARK3 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1766a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P27448
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	2G12
Isotype	IgG1
Calculated MW	84429
Description	The protein encoded by this gene is activated by phosphorylation and in turn is involved in the phosphorylation of tau proteins MAP2 and MAP4. Several transcript variants encoding different isoforms have been found for this gene.
Immunogen	Purified recombinant fragment of human MARK3 (AA: 435-658) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	4140
Other Names	MAP/microtubule affinity-regulating kinase 3, 2.7.11.1, C-TAK1, cTAK1, Cdc25C-associated protein kinase 1, ELKL motif kinase 2, EMK-2, Protein kinase STK10, Ser/Thr protein kinase PAR-1, Par-1a, Serine/threonine-protein kinase p78, MARK3, CTAK1, EMK2
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MARK3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MARK3
Synonyms	CTAK1, EMK2

Function	Serine/threonine-protein kinase (PubMed: 16822840, PubMed:16980613, PubMed:23666762). Involved in the specific phosphorylation of microtubule-associated proteins for MAP2 and MAP4. Phosphorylates the microtubule-associated protein MAPT/TAU (PubMed:23666762). Phosphorylates CDC25C on 'Ser-216' (PubMed:12941695). Regulates localization and activity of some histone deacetylases by mediating phosphorylation of HDAC7, promoting subsequent interaction between HDAC7 and 14-3-3 and export from the nucleus (PubMed:16980613). Regulates localization and activity of MITF by mediating its phosphorylation, promoting subsequent interaction between MITF and 14-3-3 and retention in the cytosol (PubMed:16822840). Negatively regulates the Hippo signaling pathway and antagonizes the phosphorylation of LATS1. Cooperates with DLG5 to inhibit the kinase activity of STK3/MST2 toward LATS1 (PubMed:28087714). Phosphorylates PKP2 and KSR1 (PubMed:12941695).
Cellular Location	Cell membrane; Peripheral membrane protein. Cell projection, dendrite. Cytoplasm
Tissue Location	Ubiquitous.

References

1.Biochem Biophys Res Commun. 2010 Apr 16;394(4):890-5.2.Biochem J. 2008 Apr 15;411(2):249-60.

Images

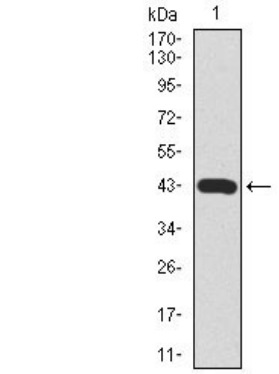

Figure 1: Western blot analysis using MARK3 mAb against human MARK3 recombinant protein. (Expected MW is 40.8 kDa)

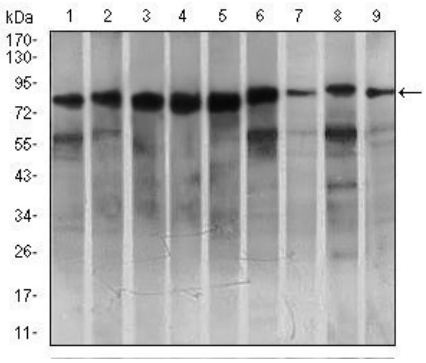

Figure 2: Western blot analysis using MARK3 mouse mAb against HeLa (1), SK-N-SH (2), K562 (3), HCT116 (4), HEK293 (5), 3T3L1 (6), NIH3T3 (7), Jurkat (8), and A431 (9) cell lysate.

Figure 3: Flow cytometric analysis of SK-N-SH cells using MARK3 mouse mAb (green) and negative control (red).

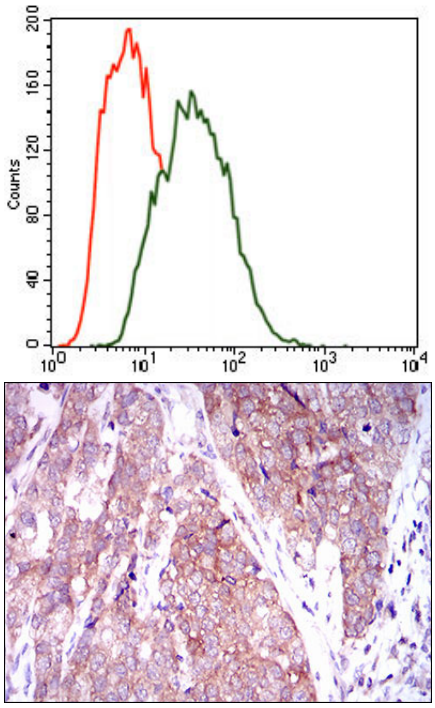

Figure 4: Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using MARK3 mouse mAb with DAB staining.