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MASTL Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1911B

Product Information

Application	WB, IF, E
Primary Accession	Q96GX5
Other Accession	NP_001165774.1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Clone Names	235CT7.8.2.3
Calculated MW	97319

Additional Information

Gene ID	84930
Other Names	Serine/threonine-protein kinase greatwall, GW, GWL, hGWL, Microtubule-associated serine/threonine-protein kinase-like, MAST-L, MASTL, GW, GWL, THC2
Target/Specificity	This MASTL monoclonal antibody is generated from mouse immunized with MASTL recombinant protein.
Dilution	WB~~1:500~1000 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MASTL Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MASTL
Synonyms	GW, GWL, THC2
Function	Serine/threonine kinase that plays a key role in M phase by acting as a regulator of mitosis entry and maintenance (PubMed:19680222). Acts by

promoting the inactivation of protein phosphatase 2A (PP2A) during M phase: does not directly inhibit PP2A but acts by mediating phosphorylation and subsequent activation of ARPP19 and ENSA at 'Ser-62' and 'Ser-67', respectively (PubMed:38123684). ARPP19 and ENSA are phosphatase inhibitors that specifically inhibit the PPP2R2D (PR55-delta) subunit of PP2A. Inactivation of PP2A during M phase is essential to keep cyclin-B1-CDK1 activity high (PubMed:20818157). Following DNA damage, it is also involved in checkpoint recovery by being inhibited. Phosphorylates histone protein in vitro; however such activity is unsure in vivo. May be involved in megakaryocyte differentiation.

Cellular Location

Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus. Cleavage furrow. Note=During interphase is mainly nuclear, upon nuclear envelope breakdown localizes at the cytoplasm and during mitosis at the centrosomes. Upon mitotic exit moves to the cleavage furrow.

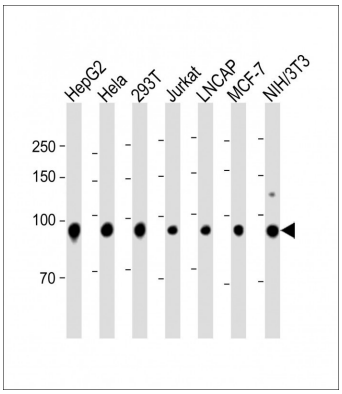
Background

This gene encodes a microtubule-associated serine/threonine kinase. Mutations at this locus have been associated with autosomal dominant thrombocytopenia, also known as thrombocytopenia-2. Alternatively spliced transcript variants have been described for this locus.

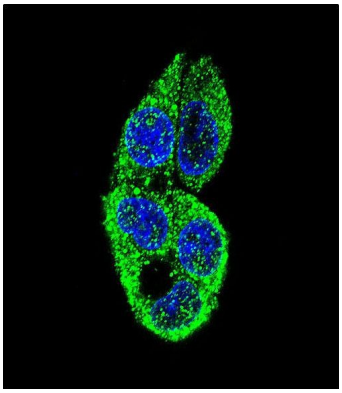
References

Gandhi, M.J., et al. Hum. Hered. 55(1):66-70(2003)
Drachman, J.G., et al. Blood 96(1):118-125(2000)
Savoia, A., et al. Am. J. Hum. Genet. 65(5):1401-1405(1999)

Images



All lanes: Anti-MASTL Antibody at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: 293T whole cell lysate Lane 4: Jurkat whole cell lysate Lane 5: LNCAP whole cell lysate Lane 6: MCF-7 whole cell lysate Lane 7: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Observed band size: 97 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Confocal immunofluorescent analysis of MASTL Antibody (Cat#AM1911b) with HepG2 cell followed by Alexa Fluor® 488-conjugated goat anti-mouse lgG (green). DAPI was used to stain the cell nuclear (blue).