



**Mouse (monoclonal)
Anti-Tuberin/TSC2
Unconjugated**

PRODUCT ANALYSIS SHEET

Catalog Number:	AHO1422
Lot Number:	See product label
Quantity/Volume:	100 µg/0.2 mL
Clone Number:	75R23
Isotype:	IgG κ (mouse)
Form of Antibody:	Purified immunoglobulin in phosphate buffered saline, pH 7.2, with 1% bovine serum albumin.
Preservation:	0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
Purification:	Purified from ascites by affinity chromatography.
Immunogen:	Recombinant fragment of human Tuberin expressed in <i>E. coli</i> .
Specificity:	<p>Tuberous sclerosis complex (TSC) is an autosomal dominant genetic disorder, which is characterized by seizures, mental retardation and hamartomas in multiple organs. The genetic disorder is caused by the mutation in two genes: TSC1 and TSC2. The TSC2 gene maps to chromosome 16p13.3 and encodes the protein tuberin. Tuberin or TSC2 is a ~200 kDa protein that can interact with hamartin, encoded by TSC1 gene, to form a physical and functional complex. Tuberin, together with hamartin, is widely localized within epithelial cells, lymphocytes, endocrine glands and central nervous system (CNS) in both normal subjects and TSC patients. Several investigations have demonstrated that tuberin can be phosphorylated by AKT and AMPKα and is further involved in stimulating cell growth, suggesting an important link between tuberin and growth factor signaling. The loss of tuberin is associated with cell cycle deregulation and tumor suppression.</p> <p>The antibody recognizes tuberin/TSC2 and does not react with TSC1.</p>
Species Reactivity:	Human, mouse and rat.
Applications:	This antibody is suitable for use in Western blotting.
Suggested Working Dilutions:	For Western blotting, the recommended concentration is 1 µg/mL. The optimal antibody concentration should be determined for each specific application.
Recommended Positive Control:	Human HeLa cells, mouse L929 cells.
Storage:	Store at 2-8°C. For long term storage, aliquot into small volumes and store at -20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

This product is for research use only. Not for use in diagnostic procedures.

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- References:**
- Martin, D.E. and M.N. Hall (2005) The expanding TOR signaling network. *Curr. Opin. Cell Biol.* 17(2):158-166.
- Hardie, D.G. (2004) The AMP-activated protein kinase pathway--new players upstream and downstream. *J. Cell Sci.* 117:5479-5487.
- Li, Y., et al. (2004) TSC2: filling the GAP in the mTOR signaling pathway. *Trends Biochem. Sci.* 29(1):32-38.
- Manning, B.D. and L.C. Cantley (2003) United at last: the tuberous sclerosis complex gene products connect the phosphoinositide 3-kinase/Akt pathway to mammalian target of rapamycin (mTOR) signalling. *Biochem. Soc. Trans.* 31:573-578.

Related Products:	AKT Pathway Phospho 7-Plex Antibody Bead Kit for the Luminex™ 100	Cat. #	LHO0001
	AKT Pathway Total 7-Plex Antibody Bead Kit for the Luminex™ 100	Cat. #	LHO0002
	AMPK α 1/2 [pT172] Phosphorylation Site Specific Antibody	Cat. #	44-1150G
	AKT (Total) ELISA kit	Cat. #	KHO0101
	AKT1 (Total) ELISA kit	Cat. #	KHO0531
	AKT [pS473] ELISA kit	Cat. #	KHO0111
	AKT [pS473] High Sensitivity ELISA Kit	Cat. #	KHO0541
	AKT [pT308] ELISA kit	Cat. #	KHO0201
	Anti-AMPK α Monoclonal Antibody	Cat. #	AHO1332



~ 200 kDa

Western Blot Analysis

Proteins from cell extracts of human HeLa cells (lane 1), mouse L929 cells (lane 2), and rat PC12 cells (lane 3) were resolved by SDS-PAGE and transferred to PVDF. The membranes were incubated with this Tuberin monoclonal antibody (clone 75R23) at a concentration of 1 μ g/mL for two hours at room temperature. After washing, the membranes were incubated with a goat F(ab')₂ anti-mouse IgG alkaline phosphatase conjugated antibody (Cat. # AMI4405) at a 1:2000 dilution. Bands were detected with CDP-substrate using the WesternStar™ method (Tropix) and Kodak BioMax film.

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