Human TSC1 Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 488915

Catalog Number: IC4379G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TSC1 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) TSC2 (aa 550-850), rhTSC2 (aa 1506-1748), or recombinant mouse TSC22 (aa 1-143) is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 488915
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human TSC1 Asp156-Thr300 Accession # Q92574
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10^6 cells	Jurkat human acute T cell leukemia cell line fixed with paraformaldehyde and permeabilized with saponin

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

TSC1 (Tuberous sclerosis 1), or hamartin, is a tumor suppressor which interacts with tumor suppressor TSC2 (tuberin) to form a cytoplasmic heterodimer. Mutations in either hamartin or tuberin are responsible for tuberous sclerosis (TSC), an autosomal dominant disease characterized by renal dysfunction, seizures, developmental delays, benign hamartomas and low grade neoplasms predominantly affecting the CNS, kidney, lung, skin, and heart. The TSC1/TSC2 complex suppresses cell growth by inhibiting mTOR, with TSC1 acting to inhibit the ubiquitination of TSC2, leading to increased cellular levels of TSC2 and thus enhancing its catalytic activity as a GTPase-activating protein for Rheb. TSC1 and TSC2 are also involved in the G2/M transition of the cell cycle through their interactions with CDK1 and cyclin B1. TSC1 has also been shown to interact with F-actin and ERM (Ezrin-Radixin-Moesin) proteins, implying a role in the modulation of cell adhesion and morphology.

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bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449