



Product Information

Anti-Hamartin

Developed in Rabbit
Affinity Isolated Antibody

Product Number **H 2538**

Product Description

Anti-Hamartin is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 1152-1164 of human hamartin with N-terminal added Cys-Gly-Gly chain, conjugated to KLH. The corresponding sequence is identical in rat and differs by one amino acid in mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Hamartin recognizes human, rat, and mouse hamartin. Applications include the detection of hamartin by immunoblotting (130-150 kDa). Detection of the hamartin band by immunoblotting is specifically inhibited with the immunizing peptide.

Hamartin is the protein product of the tumor suppressor gene TSC1.¹ Hamartin contains two coiled-coil regions, which have been shown to mediate binding to tuberin, the protein product of the tumor suppressor gene TSC2.^{2,3} Hamartin and tuberin are involved in the regulation of cell cycle, cell growth, cell differentiation, cell adhesion, and vesicular trafficking.⁴ Mutations in either the TSC1 or the TSC2 gene are responsible for tuberous sclerosis complex (TSC), an autosomal dominant hereditary disease characterized by mental retardation, seizures, and benign tumors (hamartomas) in multiple organs including the kidney, brain, heart, and skin.⁵

Hamartin is widely expressed in human and rat cell lines and cultures.⁶ Hamartin interacts with the ezrin-radixin-moesin (ERM) family of actin-binding proteins. Loss of hamartin function results in the disruption of cell adhesion, which may initiate the development of TSC hamartomas.⁷ Hamartin with tuberin forms a functional cytoplasmic complex that inhibits growth by inhibiting phosphorylation of S6K and 4EBP1, probably through their upstream modulator mammalian target of rapamycin (mTOR).⁸

Reagent

Anti-Hamartin is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: 1.2-1.5 mg/ml

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 0.25-0.5 µg/ml is recommended using whole extracts of rat brain and mouse NIH-3T3 cells, and a chemiluminescent reagent.

By immunoblotting, a working antibody concentration of 0.5-1.0 µg/ml is recommended using whole extract of human HeLa cells, and a chemiluminescent reagent.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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