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ProductInformation

Monoclonal Anti-Siah2
Clone Siah2-369
Purified Mouse Immunoglobulin

Product Number **S 7945**

Product Description

Monoclonal Anti-Siah2 (mouse IgG1 isotype) is derived from the hybridoma Siah2-369 produced by the fusion of mouse myeloma cells (NS1 cell) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 2-17 of human Siah2, conjugated to KLH. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-Siah2 recognizes human, monkey, bovine, canine, hamster, and mouse Siah2 (~37 kDa). The antibody can be used in ELISA, immunocytochemistry, and immunoblotting.

Ubiquitination of proteins is an important process in the pathway leading to their degradation through the proteasome. The Siah (**S**even **i**n **a**bsentia **h**omologue) protein family belongs to the E3 ubiquitin ligase protein family. These proteins can mediate E3 ubiquitin ligase activity either by direct binding to protein targets or by functioning as the essential RING domain subunit of larger E3 complexes. The RING domain is important for the selection of protein substrates. Several distinct proteins serve as substrates for ubiquitination by the Siah family, among them: β-catenin, OBF-1, N-CoR, cell surface receptor DCC, TIEG-1 TRAF2, Numb, Kid and synaptophysin.[1-3]

Three different Siah genes exist in mice, Siah1a, Siah1b, and Siah2, while humans have only two genes, Siah1and Siah2. Siah1a and Siah1b are 98% identical in their amino acid sequence and encode a 282 amino acid protein. The Siah2 in mice is a 325 amino acid protein that is 85% identical to Siah1. The different members of this family may have distinct or overlapping functions. Siah2 was implicated in the regulation of key proteins in the immune system such as TRAF, Vav1, and OBF-1. Knockout mice of Siah1a exhibit severe growth retardation, early lethality and exhibit a block in meiotic cell division during meiosis I of spermatogenesis. However, knockout mice of Siah2 are largely phenotypically normal.[4] Siah1a and Siah2 are important for the regulation of the PHD enzymes (prolylhydroxylases) that are responsible for the prolyhydroxylation of HIFα protein under hypoxia conditions.[5]

Reagent

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

Antibody Concentration: ~2 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 hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 2-4 µg/mL is recommended using total cell extract of HeLa cells.

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

References

1. Okabe, H., et al., Cancer Res., **63**, 3043-3048 (2003).
2. Nagano, Y., et al., J. Biol. Chem., **278**, 51504-51514 (2003).
3. Wheeler, T., et al., J. Biol. Chem., **277**, 10273-10282 (2002).
4. Frew, I., et al., Mol. Cell. Biol., **23**, 9150-9161 (2003).
5. Nakayama, K., et al., Cell, **117**, 941-952 (2004).

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