

Product Information

Anti-dUTPase antibody, Rat monoclonal
clone HUTP 3E6, purified from hybridoma cell culture

Catalog Number **SAB4200044**

Product Description

Anti-dUTPase (rat IgG2a isotype) is derived from the hybridoma HUTP 3E6 produced by the fusion of mouse myeloma cells (P3X63Ag8.653) and splenocytes from rat immunized with human dUTPase protein (GenelD; 1854).^{1,2} The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-dUTPase recognizes human, mouse and marmoset dUTPase.¹ The product may be used in several immunochemical techniques including immunoblotting (~ 22 kDa), immunoprecipitation, and immunocytochemistry.¹⁻⁴

Deoxyuridine triphosphatase is an essential enzyme involved in nucleotide metabolism. The encoded protein forms a ubiquitous, homo-tetrameric enzyme that hydrolyzes dUTP to dUMP and pyrophosphate. This reaction serves two cellular purposes: providing a precursor (dUMP) for the synthesis of thymine nucleotides needed for DNA replication, and limiting intracellular pools of dUTP. Elevated levels of dUTP lead to increased incorporation of uracil into DNA, which induces extensive excision repair mediated by uracil glycosylase. This repair process, resulting in the removal and reincorporation of dUTP, is self-defeating and leads to DNA fragmentation and cell death. Alternative splicing of this gene leads to different isoforms that localize to either the mitochondria or the nucleus.⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze at -20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is 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

Immunoblotting: a working antibody concentration of 0.25-0.5 µg/mL is recommended using Raji cell extracts.

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

References

1. Kremmer, E., et al., *Transplant. Proc.*, **29**, 812-814 (1997).
2. Fleischmann, J., et al., *Int. J. Cancer*, **84**, 614-617 (1999).
3. Romeike, B.F., et al., *Pathol. Res. Pract.*, **201**, 727-732 (2005).
4. Fleischmann, J., et al., *J. Med. Virol.*, **68**, 568-573 (2002).
5. Grässer, F.A., et al., *Curr. Protein Pept. Sci.*, **2**, 349-360 (2001).

RC,GG,TD,KAA 04/21-1