

Product Information

Anti-UVRAG antibody ,Mouse monoclonal
clone UVRAG-11, purified from hybridoma cell culture

Product Number **SAB4200005**

Product Description

Monoclonal Anti-UVRAG (mouse IgG1 isotype) is derived from the hybridoma UVRAG-11 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a fragment of human UVRAG (GeneID: 7405), conjugated to KLH. The corresponding sequence is identical in mouse. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-UVRAG recognizes human and mouse UVRAG. The antibody may be used in several immunochemical techniques including immunoblotting (~90 kDa) and immunoprecipitation. Detection of the UVRAG band by immunoblotting is specifically inhibited by the immunizing peptide.

Macroautophagy, usually referred to as autophagy, is a major pathway for bulk degradation of cytoplasmic constituents and organelles. In this process, portions of the cytoplasm are sequestered into double membrane vesicles, the autophagosomes, and subsequently delivered to the lysosome for degradation and recycling.^{1,2} Although autophagy is a constitutive cellular event, it is enhanced under certain conditions such as starvation, hormonal stimulation, and drug treatments.³ Autophagy is required for normal turnover of cellular components during starvation. It plays an essential role in cellular differentiation, cell death, and aging. Defective autophagy may contribute to certain human diseases such as cancer, neurodegenerative diseases, muscular disorders and pathogen infections.^{4,5} Autophagy is an evolutionary conserved pathway seen in all eukaryotic cells.¹ At least 16 ATG genes required for autophagosome formation were identified in yeast by genetic screens. For many of these genes, related homologs have been identified in mammals.⁶

UVRAG (UV irradiation resistance-associated gene) is a coiled-coil protein identified as a positive regulator of the Beclin 1-PI(3)KC3 complex. The tumor suppressor Beclin 1 forms a complex with PI(3)KC3, promoting autophagosome formation. This autophagic activity is suppressed by the proto-oncogene Bcl-2. UVRAG directly interacts with Beclin 1 via their coiled-coil domains, inducing autophagy and suppressing the proliferation and tumorigenicity of human colon cancer cells. UVRAG is monoallelically mutated in various human colon cancer cells and tissues, suggesting that UVRAG is a tumor suppressor candidate.^{7,8}

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

This product is for R&D use only, not for drug, household, or other uses.

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 2-4 µg/mL is recommended using a whole extract of human G361 cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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3. Kabeya, Y. et al., *EMBO J.*, **19**, 5720-5728 (2000).
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