

Product Information

Monoclonal Anti-Keap1, Clone Keap1-2 produced in mouse, purified immunoglobulin

Product Number **K2769**

Product Description

Monoclonal Anti-Keap1 (mouse IgG1 isotype) is derived from the hybridoma Keap1-2 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 Keap1 (GeneID: 9817), conjugated to KLH. The corresponding sequence differs by 1 amino acid in mouse and rat. 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-Keap1 recognizes human Keap1. The antibody may be used in several immunochemical techniques including immunoblotting (~69 kDa).

Kelch-like ECH-associated protein-1 (Keap1) is a component of the E3 ubiquitin ligase complex that targets the transcription factor Nrf2 (Nuclear factor erythroid 2-related factor 2) for ubiquitin-dependent degradation. Nrf2 regulates transcription of enzymes involved in cellular detoxification processes. Keap1 contains KELCH-1 like domains, as well as a BTB/POZ domain.

Keap1 interacts with Nrf2 in a redox-sensitive manner and the dissociation of the proteins in the cytoplasm is followed by transportation of Nrf2 to the nucleus. Oxidative stress blocks the E3 ligase activity of Keap1, stabilizing Nrf2 and allowing its translocation to the nucleus where it activates transcription of a battery of cytoprotective genes by binding to the antioxidant response element.¹⁻⁴

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

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

References

1. Sun, Z. et al., *PLoS One*, **4**, e6588 (2009).
2. Eggler, A.L. et al., *Biochem. J.*, **422**, 171-180 (2009).
3. Kaspar, J.W. et al., *Free Radic. Biol. Med.*, [Epub ahead of print] (2009).
4. Sekhar, K.R. et al., *Toxicol. Appl. Pharmacol.*, [Epub ahead of print] (2009).

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