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Product Information

Anti-Keap1
produced in rabbit, IgG fraction of antiserum

Product Number **K3144**

Product Description

Anti-Keap1 is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human Keap1 (GeneID: 9817), conjugated to KLH. The corresponding sequence differs by one amino acid in mouse and rat. IgG fraction of antiserum is purified from whole antiserum using protein A immobilized on agarose.

Anti-Keap1 recognizes human Keap1. The antibody may be used in several immunochemical techniques including immunoblotting (~69 kDa) and immunoprecipitation. Detection of the Keap1 band by immunoblotting is specifically inhibited by the immunizing peptide.

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.

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 maybe stored at 2–8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody dilution of 1:1,000-1: 2,000 is recommended using whole extracts of HEK-293T cells expressing human Keap1.

Immunoprecipitation: a working antibody amount of 5-10 μL is recommended using lysates of human Raji 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.*, **47**, 1304-1309 (2009).
4. Sekhar, K.R. et al., *Toxicol. Appl. Pharmacol.*, [Epub ahead of print] doi:10.1016/j.taap.2009.06.016 (2009).

VS,ST,TD,KAA,PHC,MAM 04/19-1