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PRODUCT INFORMATION



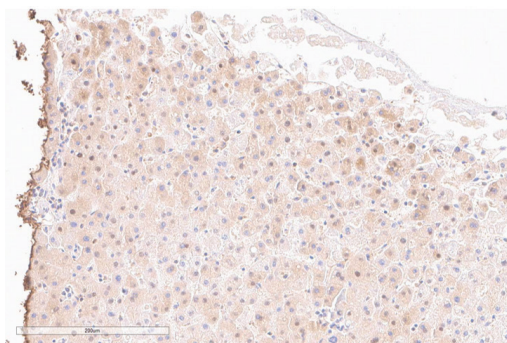
Nrf2 (N-Term) Polyclonal Antibody

Item No. 14114

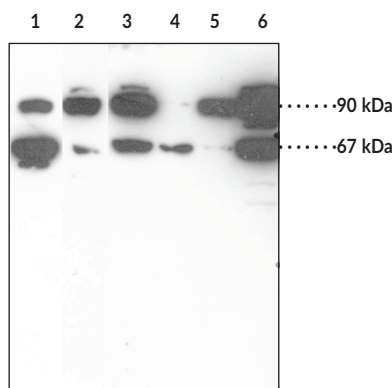
Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
Synonyms:	GABPA, HEBP1, NF-E2-related factor 2, Nuclear Factor Erythroid 2-related factor 2
Immunogen:	Peptide from the N-terminal region of human Nrf2 protein
Species Reactivity:	(+) Human, mouse, rat; other species not tested
Uniprot No.:	Q16236
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	Flow cytometry (FC), immunocytochemistry (ICC), and Western blot (WB); the recommended starting dilution for WB is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human liver tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Nrf2 (N-Term) Polyclonal Antibody (Item No. 14114) at a 1:80 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).



Lane 1: HeLa cell lysate (50 µg)
Lane 2: Mouse heart (50 µg)
Lane 3: Mouse liver (50 µg)
Lane 4: Mouse kidney (50 µg)
Lane 5: A549 cell lysate (50 µg)
Lane 6: Mouse skeletal muscle (50 µg)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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PRODUCT INFORMATION



Description

Nuclear factor erythroid 2-related factor 2 (Nrf2) is a basic leucine zipper transcription factor encoded by *NFE2L2* in humans that regulates the cellular antioxidant response.¹ It is a 605-amino acid protein comprised of seven highly conserved Nrf2-ECH (Neh) homology domains.^{2,3} Nrf2 contains a large central domain that recruits transcriptional co-activators, mediates heterodimerization with the transcription factor Maf, and can be phosphorylated by GSK3 or the ubiquitin ligase adapter protein β -TrCP.^{3,4} The Nrf2 central domain is flanked by an N-terminal Neh2 domain that binds the negative regulator Kelch-like ECH-associated protein 1 (Keap1; Item No. 32035) and a C-terminal Neh3 domain that is required for transactivation.³ Nrf2 is ubiquitously expressed and, under homeostatic conditions, associates with Keap1 in the cytoplasm, preventing Nrf2 nuclear translocation and promoting its ubiquitination and proteasomal degradation.^{2,5} In the presence of xenobiotic electrophiles or oxidants, Keap1 releases Nrf2 which translocates to the nucleus, dimerizes with Maf, and induces the expression of a variety of cytoprotective genes that have antioxidant, anti-inflammatory, and metabolic functions.^{1,6,7} *Nrf2* siRNA knockdown increases DNA-crosslinking and apoptosis induced by cisplatin (Item No. 13119) in A549 cancer cells, indicating that Nrf2 contributes to chemoresistance.⁸ Tumor Nrf2 levels are increased in patients with non-small cell lung cancer (NSCLC) and this increase is associated with poor overall survival.⁹ Cayman's Nrf2 (N-Term) Polyclonal Antibody can be used for flow cytometry (FC), immunocytochemistry (ICC), and Western blot (WB) applications. The antibody recognizes native and polyubiquitinated Nrf2 at 67 and 90 kDa, respectively, from human, mouse, and rat samples.

References

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