Datasheet for ABIN129526

anti-NRF1 antibody (AA 1-534)

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Overview

Quantity:	500 µg
Target:	NRF1
Binding Specificity:	AA 1-534
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)

Product Details

Purpose:	NRF1 Antibody
Immunogen:	Immunogen: This protein A purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a purified recombinant mouse NRF1 protein corresponding to aa 1- 534 of the native protein. Immunogen Type: Recombinant Protein
Isotype:	IgG
Cross-Reactivity (Details):	This protein A purified antibody is directed against mouse NRF1.
Characteristics:	Synonyms: rabbit anti-NRF1 antibody, rabbit anti-NRF 1 antibody, NRF-1, alpha pal antibody, alpha palindromic binding protein antibody, locus control region factor 1 antibody, NFE2 related factor 1 antibody, nuclear respiratory factor 1 antibody, transcription factor 11 antibody
Purification:	The product was purified from monospecific antiserum by protein A affinity purification.
Sterility:	Sterile filtered

Target Details

Target:	NRF1
Alternative Name:	Nrf1 (NRF1 Products)
Background:	Background: NRF1 (also known as nuclear respiratory factor 1, alpha palindromic binding protein and alpha-pal) is the mammalian homolog to the erect wing (ewg) Drosophila protein that is required for proper development of the central nervous system and indirect flight muscles. In mammals NRF1 functions as a transcription factor that activates the expression of the EIF2S1 (EIF2-alpha) gene. This protein links the transcriptional modulation of key metabolic genes to cellular growth and development and has been implicated in the control of nuclear genes required for respiration, heme biosynthesis, and mitochondrial DNA transcription and replication. NRF1 forms a homodimer and binds DNA as a dimer. NRF1 shows a nuclear localization and is widely expressed in embryonic, fetal, and adult tissues. Phosphorylation of NRF1 enhances DNA binding. Multiple splice variants have been identified for this protein.
Gene ID:	18181, 13529317
UniProt:	Q9WU00
Pathways:	Regulation of Lipid Metabolism by PPARalpha

Application Details

Application Notes:	Immunohistochemistry Dilution: 2 mg/mL - 5 µg/mL Application Note: This protein A purified antibody has been tested for use in ELISA, immunohistochemistry and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 67 kDa in size corresponding to NRF1 by western blotting in the appropriate cell lysate or extract. Splice variants exist for this protein that may result in the detection of lower molecular weight bands. Western Blot Dilution: 1:500 - 1:2,000 ELISA Dilution: 1:3,000 - 1:10,000 Other: User Optimized
Restrictions:	For Research Use only

Handling

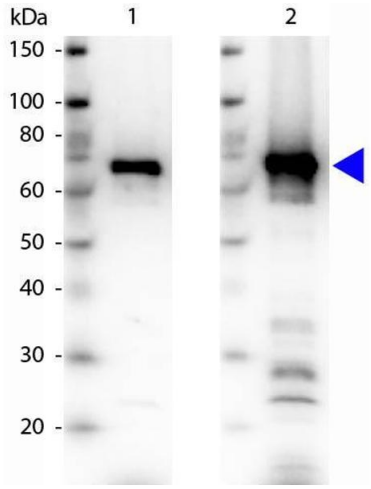
Format:	Liquid
Concentration:	2.3 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Handling

	Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

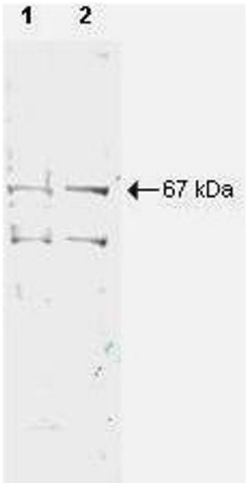
Publications

Product cited in:	Hinkley, Morton, Ichinoseki-Sekine, Huertas, Smuder: "Exercise Training Prevents Doxorubicin-induced Mitochondrial Dysfunction of the Liver." in: **Medicine and science in sports and exercise**, Vol. 51, Issue 6, pp. 1106-1115, (2019) (PubMed). Miura, Saitoh, Kokubun, Owada, Yamauchi, Machii, Takeishi: "Mitochondrial-Targeted Antioxidant Maintains Blood Flow, Mitochondrial Function, and Redox Balance in Old Mice Following Prolonged Limb Ischemia." in: **International journal of molecular sciences**, Vol. 18, Issue 9, (2018) (PubMed). Joseph, Nguyen, Welter, Dominguez, Behnke, Adhihetty: "Mitochondrial adaptations evoked with exercise are associated with a reduction in age-induced testicular atrophy in Fischer-344 rats." in: **Biogerontology**, Vol. 15, Issue 5, pp. 517-534, (2015) (PubMed).



Western Blotting

Image 1. Western blot of Rabbit Anti-NRF1 antibody. Lane: NFR1-HIS recombinant protein. Load: 50 ng per lane. Primary antibody - 1: NRF1 antibody at 1:1,000 overnight at 4°C. Primary antibody - 2: 6xHIS Epitope tag antibody at 1:1,000 overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:40,000 for 30 min at RT. Blocking: ABIN925618 for 30 min at RT. Predicted/observed size: 67 kDa, 67 kDa for NRF1-His tagged. Other band(s): None.



Western Blotting

Image 2. Western blot using Protein A Purified anti-NRF1 antibody shows detection of a 67-kDa band corresponding to human NRF1 in a (lane 1) HeLa nuclear extract and (lane 2) whole cell lysate (molecular weight marker not shown). Approx. 10 µg of each lysate was separated by SDS-PAGE and transferred onto nitrocellulose. The blot was incubated with a 1:500 dilution of the antibody at room temperature for 1 h followed by detection using700 labeled Goat-a-Rabbit IgG [H&L] diluted 1:2,500.700 fluorescence image was captured using the Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.