

Store at
-20°C

NRF2 Control Cell Extracts

#41645

100 µL
(10 western blots)Support: +1-978-867-2388 (U.S.)
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orders@cellsignal.com**For Research Use Only. Not For Use In Diagnostic Procedures.**

Product Includes	Product #	Quantity
NRF2 Control Cell Extracts (A-172 untreated)	87799	100 µL
NRF2 Control Cell Extracts (A-172 + MG-132)	98324	100 µL

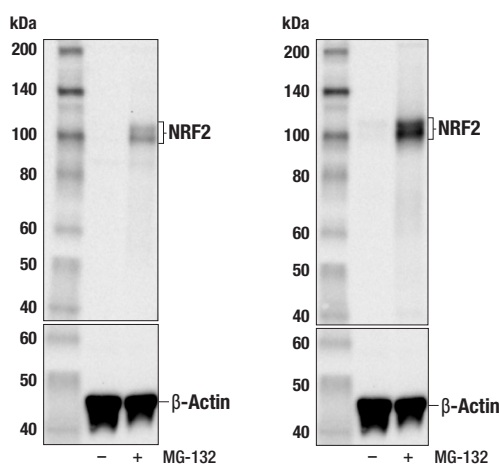
Background: The nuclear factor-like 2 (NRF2) transcriptional activator binds antioxidant response elements (ARE) of target gene promoter regions to regulate expression of oxidative stress response genes. Under basal conditions, the NRF2 inhibitor I κ Nf2 (also called KEAP1) binds and retains NRF2 in the cytoplasm where it can be targeted for ubiquitin-mediated degradation (1). Small amounts of constitutive nuclear NRF2 maintain cellular homeostasis through regulation of basal expression of antioxidant response genes. Following oxidative or electrophilic stress, KEAP1 releases NRF2, thereby allowing the activator to translocate to the nucleus and bind to ARE-containing genes (2). The coordinated action of NRF2 and other transcription factors mediates the response to oxidative stress (3). Altered expression of NRF2 is associated with chronic obstructive pulmonary disease (COPD) (4). NRF2 activity in lung cancer cell lines directly correlates with cell proliferation rates, and inhibition of NRF2 expression by siRNA enhances anti-cancer drug-induced apoptosis (5).

Description: *NRF2 Control Cell Extracts (A-172 untreated):* Total cell extracts from A-172 cells serve as a negative control. Supplied in SDS Sample Buffer.

NRF2 Control Cell Extracts (A-172 + MG-132): Total cell extracts from A-172 cells treated with MG-132 (10 µM, overnight) serve as a positive control.

This lysate pair is produced as a control for western blotting of NRF2 protein.

Directions for Use: Boil for 3 minutes prior to use. Load 10 µL of untreated and MG-132 treated NRF2 Control Cell Extracts per lane.



Western blot analysis of NRF2 Control Cell Extracts using NRF2 (D1Z9C) XP[®] Rabbit mAb #12721 (left, upper) and NRF2 (E5F1A) Rabbit mAb #20733 (right, upper) or β -Actin (13E5) Rabbit mAb #4970 (lower).

Storage: Supplied in SDS Sample Buffer: 62.5 mM Tris-HCl (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v bromophenol blue or phenol red. Store at -20°C, or at -80°C for long-term storage.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

- (1) Cullinan, S.B. et al. (2004) *Mol Cell Biol* 24, 8477-86.
- (2) Nguyen, T. et al. (2005) *J Biol Chem* 280, 32485-92.
- (3) Jaiswal, A.K. (2004) *Free Radic Biol Med* 36, 1199-207.
- (4) Suzuki, M. et al. (2008) *Am J Respir Cell Mol Biol* 39, 673-82.
- (5) Homma, S. et al. (2009) *Clin Cancer Res* 15, 3423-32.

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