

# Keap1 (H-190): sc-33569

## BACKGROUND

Keap1 (kelch-like ECH-associated protein 1, INrf2, KLHL19) is a stress sensing adaptor for the Cullin3 (Cul3)-dependent E3 ubiquitin ligase complex that negatively regulates Nrf2 (NF-E2-related factor 2). Steady state levels of proteins are under the influence of the ubiquitin pathway, which consists of ubiquitin activation (E1), conjugation (E2) and ligation (E3). Keap1 assembles into an E3 ubiquitin ligase complex with Cul3 and Rbx1 and targets lysine residues in the N-terminal Neh2 domain of Nrf2 for ubiquitin conjugation. The Keap1-Nrf2 system mediates cytoprotective gene expression in response to oxidative and/or electrophilic stresses. Keap1 constitutively suppresses Nrf2 activity under unstressed conditions, oxidants or electrophiles provoke the repression of Keap1 activity, inducing Nrf2 activation. Cys 273 and Cys 288 residues of Keap1 are required for suppressing Nrf2 nuclear accumulation. Keap1 sequesters Nrf2 in the cytoplasm through an active Crm1/exportin-dependent nuclear export mechanism.

## CHROMOSOMAL LOCATION

Genetic locus: KEAP1 (human) mapping to 19p13.2; Keap1 (mouse) mapping to 9 A3.

## SOURCE

Keap1 (H-190) is a rabbit polyclonal antibody raised against amino acids 181-370 mapping within an internal region of Keap1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Keap1 (H-190) is recommended for detection of Keap1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Keap1 (H-190) is also recommended for detection of Keap1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Keap1 siRNA (h): sc-43878, Keap1 siRNA (m): sc-43879, Keap1 shRNA Plasmid (h): sc-43878-SH, Keap1 shRNA Plasmid (m): sc-43879-SH, Keap1 shRNA (h) Lentiviral Particles: sc-43878-V and Keap1 shRNA (m) Lentiviral Particles: sc-43879-V.

Molecular Weight of Keap1: 69 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or A-673 cell lysate: sc-2414.

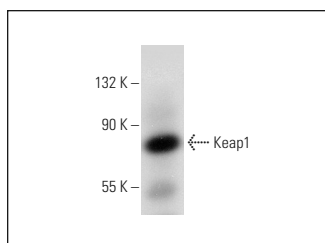
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

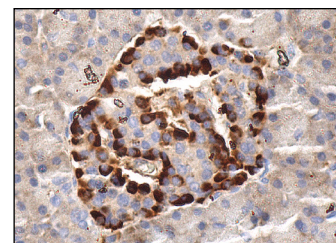
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



Keap1 (H-190): sc-33569. Western blot analysis of Keap1 expression in Hep G2 whole cell lysate.



Keap1 (H-190): sc-33569. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of subset of cells in Islets of Langerhans and glandular cells.

## SELECT PRODUCT CITATIONS

- Diers, A.R., et al. 2010. Modulation of mammary cancer cell migration by 15-deoxy- $\delta$ (12,14)-prostaglandin  $J_2$ : implications for anti-metastatic therapy. *Biochem. J.* 430: 69-78.
- Wan, Y.J., et al. 2010. Alterations in tumor biomarker GSTP gene methylation patterns induced by prenatal exposure to PFOS. *Toxicology* 274: 57-64.
- Mobasher, M.A., et al. 2013. Protein tyrosine phosphatase 1B modulates GSK3 $\beta$ /Nrf2 and IGF1R signaling pathways in acetaminophen-induced hepatotoxicity. *Cell Death Dis.* 4: e626.
- Yubero-Serrano, E.M., et al. 2013. Postprandial antioxidant gene expression is modified by Mediterranean diet supplemented with coenzyme Q<sub>10</sub> in elderly men and women. *Age* 35: 159-170.
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- Zhu, H., et al. 2014. DJ-1 mediates the resistance of cancer cells to dihydroartemisinin through reactive oxygen species removal. *Free Radic. Biol. Med.* 71: 121-132.
- Gonzalez-Rodriguez, A., et al. 2014. In vivo siRNA delivery of Keap1 modulates death and survival signaling pathways and attenuates concanavalin-A-induced acute liver injury in mice. *Dis. Model. Mech.* 7: 1093-1100.
- Rizvi, F., et al. 2015. Suppression in PHLPP2 induction by morin promotes Nrf2-regulated cellular defenses against oxidative injury to primary rat hepatocytes. *Redox Biol.* 6: 587-598.



Try **Keap1 (G-2): sc-365626** or **Keap1 (A-4): sc-515432**, our highly recommended monoclonal alternatives to Keap1 (H-190). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Keap1 (G-2): sc-365626**.