

**KEAP1 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1778a**

**Specification**

**KEAP1 Antibody - Product Information**

Application	<b>E, WB, IF, FC</b>
Primary Accession	<a href="#">O14145</a>
Reactivity	<b>Human, Mouse</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>69.7kDa KDa</b>

**Description**

This gene encodes a protein containing KELCH-1 like domains, as well as a BTB/POZ domain. Kelch-like ECH-associated protein 1 interacts with NF-E2-related factor 2 in a redox-sensitive manner and the dissociation of the proteins in the cytoplasm is followed by transportation of NF-E2-related factor 2 to the nucleus. This interaction results in the expression of the catalytic subunit of gamma-glutamylcysteine synthetase. Two alternatively spliced transcript variants encoding the same isoform have been found for this gene.

**Immunogen**

Purified recombinant fragment of human KEAP1 (AA: 380-624) expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**KEAP1 Antibody - Additional Information**

**Gene ID** 9817

**Other Names**

Kelch-like ECH-associated protein 1, Cytosolic inhibitor of Nrf2, INrf2, Kelch-like protein 19, KEAP1, INRF2, KIAA0132, KLHL19

**Dilution**

E~~1/10000  
WB~~1/500 - 1/2000  
IF~~1/50  
FC~~1/200 - 1/400

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

KEAP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## KEAP1 Antibody - Protein Information

**Name** KEAP1 {ECO:0000303|PubMed:14585973, ECO:0000312|HGNC:HGNC:23177}

### Function

Substrate-specific adapter of a BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase complex that regulates the response to oxidative stress by targeting NFE2L2/NRF2 for ubiquitination (PubMed:<a href="http://www.uniprot.org/citations/14585973" target="\_blank">14585973</a>, PubMed:<a href="http://www.uniprot.org/citations/15379550" target="\_blank">15379550</a>, PubMed:<a href="http://www.uniprot.org/citations/15572695" target="\_blank">15572695</a>, PubMed:<a href="http://www.uniprot.org/citations/15601839" target="\_blank">15601839</a>, PubMed:<a href="http://www.uniprot.org/citations/15983046" target="\_blank">15983046</a>, PubMed:<a href="http://www.uniprot.org/citations/37339955" target="\_blank">37339955</a>). KEAP1 acts as a key sensor of oxidative and electrophilic stress: in normal conditions, the BCR(KEAP1) complex mediates ubiquitination and degradation of NFE2L2/NRF2, a transcription factor regulating expression of many cytoprotective genes (PubMed:<a href="http://www.uniprot.org/citations/15601839" target="\_blank">15601839</a>, PubMed:<a href="http://www.uniprot.org/citations/16006525" target="\_blank">16006525</a>). In response to oxidative stress, different electrophile metabolites trigger non-enzymatic covalent modifications of highly reactive cysteine residues in KEAP1, leading to inactivate the ubiquitin ligase activity of the BCR(KEAP1) complex, promoting NFE2L2/NRF2 nuclear accumulation and expression of phase II detoxifying enzymes (PubMed:<a href="http://www.uniprot.org/citations/16006525" target="\_blank">16006525</a>, PubMed:<a href="http://www.uniprot.org/citations/17127771" target="\_blank">17127771</a>, PubMed:<a href="http://www.uniprot.org/citations/18251510" target="\_blank">18251510</a>, PubMed:<a href="http://www.uniprot.org/citations/19489739" target="\_blank">19489739</a>, PubMed:<a href="http://www.uniprot.org/citations/29590092" target="\_blank">29590092</a>). In response to selective autophagy, KEAP1 is sequestered in inclusion bodies following its interaction with SQSTM1/p62, leading to inactivation of the BCR(KEAP1) complex and activation of NFE2L2/NRF2 (PubMed:<a href="http://www.uniprot.org/citations/20452972" target="\_blank">20452972</a>). The BCR(KEAP1) complex also mediates ubiquitination of SQSTM1/p62, increasing SQSTM1/p62 sequestering activity and degradation (PubMed:<a href="http://www.uniprot.org/citations/28380357" target="\_blank">28380357</a>). The BCR(KEAP1) complex also targets BPTF and PGAM5 for ubiquitination and degradation by the proteasome (PubMed:<a href="http://www.uniprot.org/citations/15379550" target="\_blank">15379550</a>, PubMed:<a href="http://www.uniprot.org/citations/17046835" target="\_blank">17046835</a>).

### Cellular Location

Cytoplasm. Nucleus. Note=Mainly cytoplasmic (PubMed:15601839). In response to selective autophagy, relocalizes to inclusion bodies following interaction with SQSTM1/p62 (PubMed:20452972).

### Tissue Location

Broadly expressed, with highest levels in skeletal muscle.

## KEAP1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

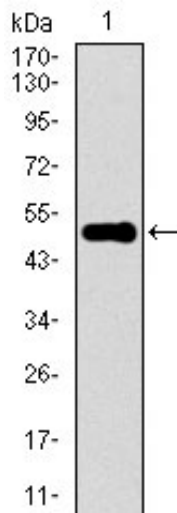
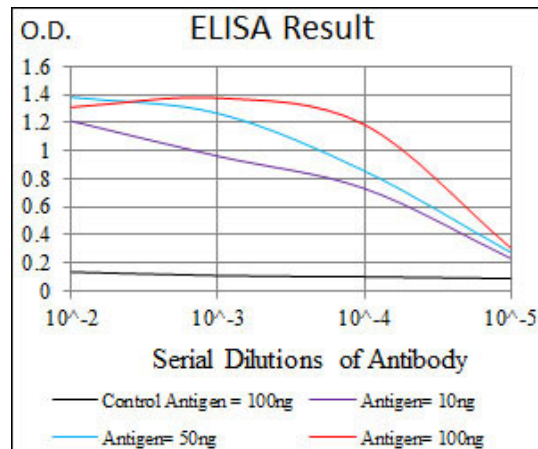


Figure 1: Western blot analysis using KEAP1 mAb against human KEAP1 recombinant protein. (Expected MW is 52.7 kDa)

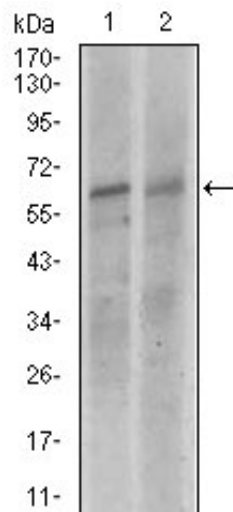


Figure 2: Western blot analysis using KEAP1 mouse mAb against NIH3T3 (1), and A549 (2) cell lysate.

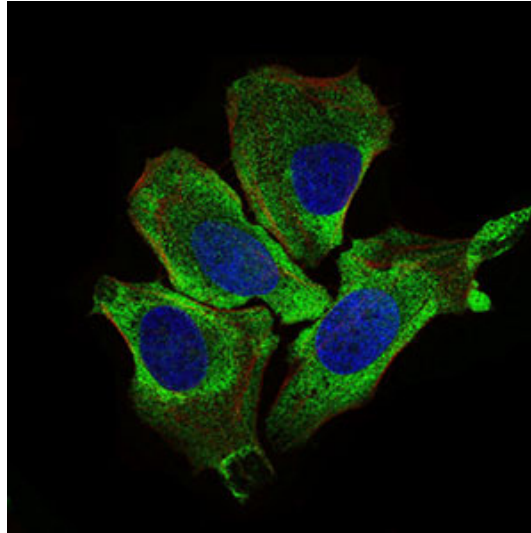


Figure 3: Immunofluorescence analysis of HeLa cells using KEAP1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

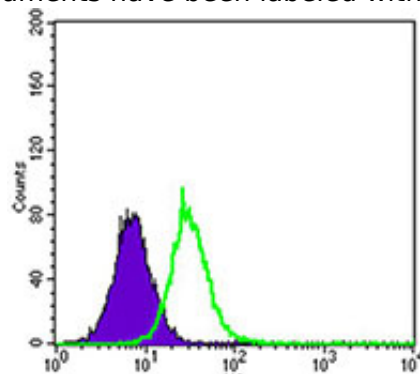


Figure 4: Flow cytometric analysis of HepG2 cells using KEAP1 mouse mAb (green) and negative control (purple).

#### KEAP1 Antibody - References

1. Cell Signal. 2010 Nov;22(11):1645-54.
2. Mol Cancer Ther. 2010 Feb;9(2):336-46.