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KD-Validated Anti-KEAP1 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1111

Specification

KD-Validated Anti-KEAP1 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q14145
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 70 kDa, observed, 55-60 kDa KDa**
Gene Name	**KEAP1**
Aliases	**KEAP1; Kelch Like ECH Associated Protein 1; KLHL19; INrf2; KIAA0132; Kelch-Like ECH-Associated Protein 1; Kelch-Like Family Member 19; Cytosolic Inhibitor Of Nrf2; Kelch-Like Protein 19; MGC10630; MGC20887; MGC1114; MGC4407; MGC9454; KEAP1 Delta C; INRF2**
Immunogen	**Recombinant protein of human KEAP1**

KD-Validated Anti-KEAP1 Mouse Monoclonal Antibody - Additional Information

Gene ID **9817**

Other Names
Kelch-like ECH-associated protein 1, Cytosolic inhibitor of Nrf2 {ECO:0000303|Ref.1}, INrf2 {ECO:0000303|Ref.1}, Kelch-like protein 19 {ECO:0000312|HGNC:HGNC:23177}, KEAP1 {ECO:0000303|PubMed:14585973, ECO:0000312|HGNC:HGNC:23177}

KD-Validated Anti-KEAP1 Mouse Monoclonal 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:14585973, PubMed:15379550, PubMed:15572695, PubMed:15601839, PubMed:15983046, PubMed:37339955). 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:15601839, PubMed:<a

href="http://www.uniprot.org/citations/16006525" target="_blank">16006525). 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:16006525, PubMed:17127771, PubMed:18251510, PubMed:19489739, PubMed:29590092). 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:20452972). The BCR(KEAP1) complex also mediates ubiquitination of SQSTM1/p62, increasing SQSTM1/p62 sequestering activity and degradation (PubMed:28380357). The BCR(KEAP1) complex also targets BPTF and PGAM5 for ubiquitination and degradation by the proteasome (PubMed:15379550, PubMed:17046835).

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.

KD-Validated Anti-KEAP1 Mouse Monoclonal 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 Cytomety
- Cell Culture

KD-Validated Anti-KEAP1 Mouse Monoclonal Antibody - Images

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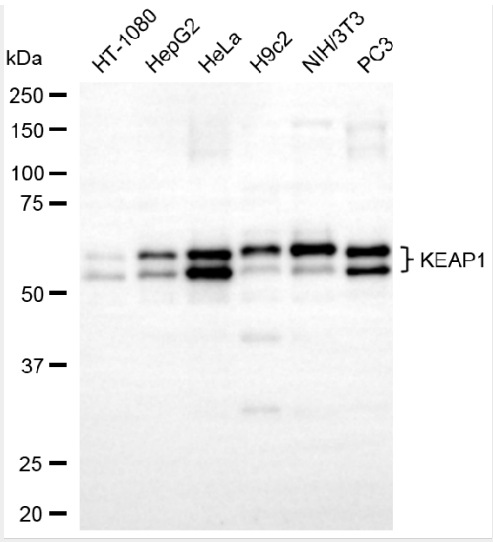
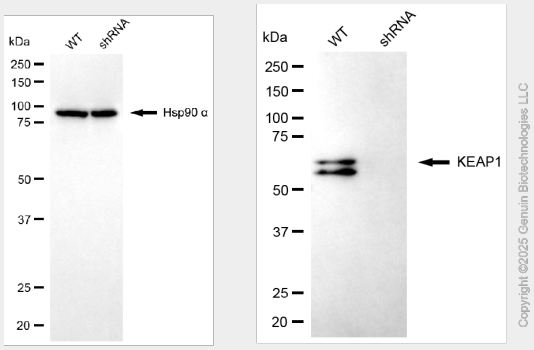
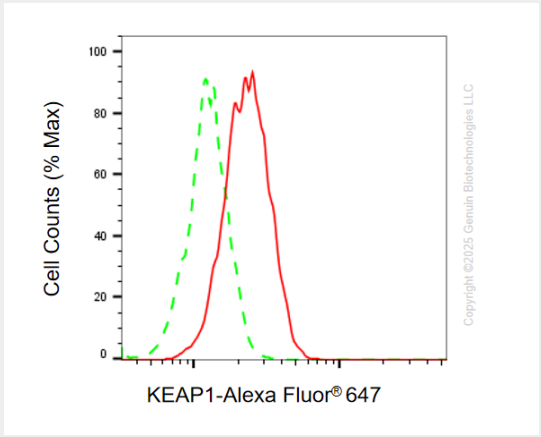


Western blotting analysis using anti-KEAP1 antibody (Cat#AGI1111). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-KEAP1 antibody (Cat#AGI1111, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-KEAP1 antibody (Cat#AGI1111). KEAP1 expression in wild-type (WT) and KEAP1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-KEAP1 antibody (Cat#AGI1111, 1:1,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of KEAP1 expression in HAP-1 cells using anti-KEAP1 antibody (Cat# AGI1111, 1:2,000). Green, isotype control; red, KEAP1.