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Anti-Keap1 Antibody
Catalog # ABO10973

Specification

Anti-Keap1 Antibody - Product Information

Application	**WB**
Primary Accession	Q14145
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Kelch-like ECH-associated protein 1(KEAP1) detection. Tested with WB in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-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

Calculated MW
69666 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Cytoplasm. Nucleus. Shuttles between cytoplasm and nucleus.

Tissue Specificity
Broadly expressed, with highest levels in skeletal muscle. .

Protein Name
Kelch-like ECH-associated protein 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human Keap1(46-60aa QHGNRTFSYTLEDHT), different from the related rat and mouse sequences by one amino acid.

Purification

Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Contains 1 BACK (BTB/Kelch associated) domain.

Anti-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:14585973, PubMed:15379550, PubMed:15572695, PubMed:15983046, PubMed:15601839, 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: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:19489739, PubMed:16006525, PubMed:17127771, PubMed:18251510, 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).

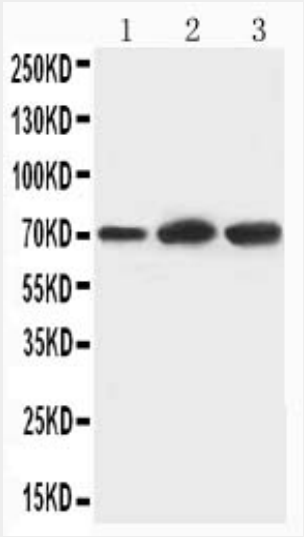
Tissue Location
Broadly expressed, with highest levels in skeletal muscle.

Anti-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 Cytomety
- Cell Culture

Anti-Keap1 Antibody - Images



Anti-Keap1 antibody, ABO10973, Western blottingLane 1: U87 Cell LysateLane 2: HT1080 Cell LysateLane 3: PANC Cell Lysate

Anti-Keap1 Antibody - Background

KEAP1(KELCH-LIKE ECH-ASSOCIATED PROTEIN 1), is a protein that in humans is encoded by the Keap1 gene. The KIAA0132 gene is mapped on 19p13.2. Keap1 contains a central BTB/POZ domain and a C-terminal double glycine repeat(DGR), or Kelch, module. Keap1 has been shown to interact with Nrf2, a master regulator of the antioxidant response, which is important for the amelioration of oxidative stress. In the presence of the electrophilic agent diethylmalate, Nrf2 activity is released from Keap1 and Nrf2 translocate to the nucleus. Under quiescent conditions, Nrf2 is anchored in the cytoplasm through binding to Keap1, which, in turn, facilitates the ubiquitination and subsequent proteolysis of Nrf2. Because Nrf2 activation leads to a coordinated antioxidant and anti-inflammatory response, and Keap1 represses Nrf2 activation, Keap1 has become a very attractive drug target.