

Rabbit KEAP1 Polyclonal Antibody | anti-KEAP1 antibody

KEAP1 Antibody

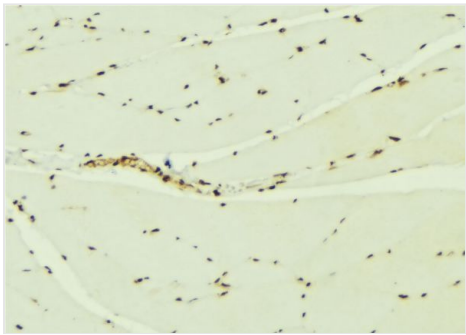
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326402	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

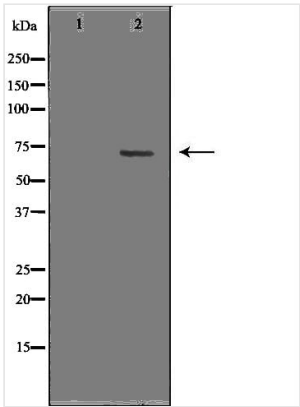
KEAP1; Polyclonal Antibody; KEAP1 Antibody; Cytosolic inhibitor of Nrf2; INrf 2; INrf2; Keap 1; KEAP1_HUMAN; Kelch like ECH associated protein 1; Kelch like family member 19; Kelch like protein 19; Kelch-like ECH-associated protein 1; Kelch-like protein 19; KIAA0132; KLHL 19; KLHL19; MGC10630; MGC1114; MGC20887; MGC4407; MGC9454; anti-KEAP1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	KEAP1 antibody detects endogenous levels of total KEAP1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	624
Applicable Applications for anti-KEAP1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human KEAP1
Subcellular Location	Cytoplasm. Nucleus. Shuttles between cytoplasm and nucleus.
Tissue Specificity	Broadly expressed, with highest levels in skeletal muscle.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemistry)
AAA326402 at 1/100 staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of extracts of HepG2, using KEAP1 antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-KEAP1 antibody

Description: 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 INrf2 (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 maintains 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). The NRF2 repressor KEAP1 contains an amino terminal BTB/POZ domain and a carboxyl terminal KELCH domain (6, 7). The KELCH domain is required for interacting with NRF2 and the BTB/POZ domain functions in binding Cul3 E3 ubiquitin ligase (8-10). Under normal conditions, the complex leads to the cytoplasmic sequestration and ubiquitin-mediated proteasomal degradation of NRF2. Electrophilic modification of KEAP1 leads to disassociation of the NRF2/KEAP1 complex. KEAP1 also targets the down regulation of NF-kappaB activity by targeting IKKbeta degradation (11).

Function: Acts as a substrate adapter protein for the E3 ubiquitin ligase complex formed by CUL3 and RBX1 and targets NFE2L2/NRF2 for ubiquitination and degradation by the proteasome, thus resulting in the suppression of its transcriptional activity and the repression of antioxidant response element-mediated detoxifying enzyme gene expression. Retains NFE2L2/NRF2 and may also retain BPTF in the cytosol. Targets PGAM5 for ubiquitination and degradation by the proteasome.

Subunit Structure: Homodimer. Forms a ternary complex with NFE2L2 and PGAM5. Interacts with the N-terminal regulatory domain of NFE2L2/NRF2. Interacts with BPTF and PTMA. Interacts with CUL3. Part of a complex that contains KEAP1, CUL3 and RBX1. Interacts with NFE2L1 and MAP1LC3B. Interacts indirectly with ENC1. Interacts with SESN1 and SESN2 (PubMed:23274085). Interacts with HSP90AA1 and HSP90AB1 (PubMed:26517842).

Post-translational Modifications: Ubiquitinated by the E3 ubiquitin ligase complex formed by CUL3 and RBX1 and is subject to proteasomal-independent degradation. Quinone-induced oxidative stress, but not sulforaphane, increases its ubiquitination. Ubiquitination and subsequent degradation is most pronounced following prolonged exposure of cells to oxidative stress, particularly in glutathione-deficient cells that are highly susceptible to oxidative stress.

Similarity: The Kelch repeats mediate interaction with NF2L2/NRF2, BPTF and PGAM5.

NCBI AND UNIPROT INFORMATION

NCBI GI #	22027642
NCBI GeneID	9817
NCBI Accession #	NP_036421.2
NCBI GenBank Nucleotide #	NM_012289.3
UniProt Accession #	Q14145; Q6LEP0; Q8WTX1; Q9BPY9; B3KPD5

Molecular Weight	Observed: 70 kDa Predicted: 70 kDa
NCBI Official Full Name	kelch-like ECH-associated protein 1
NCBI Official Synonym Full Names	kelch like ECH associated protein 1
NCBI Official Symbol	KEAP1
NCBI Official Synonym Symbols	INrf2; KLHL19
NCBI Protein Information	kelch-like ECH-associated protein 1
UniProt Protein Name	Kelch-like ECH-associated protein 1
UniProt Gene Name	KEAP1
UniProt Synonym Gene Names	INRF2; KIAA0132; KLHL19; INrf2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/keap1-antibody-immunohistochemistry-western-blot-elisa/326402>