

Anti-KEAP1 Antibody

Catalog Number: A00514

About KEAP1

KEAP1 (kelch-like ECH-associated protein 1) is a stress sensing adaptor for the Cullin3 (Cul3)-dependent E3 ubiquitin ligase complex that negatively regulates NRF2 (NF-E2-related factor 2) and plays a role in the oxidative stress response. It targets NFE2L2/NRF2 for ubiquitination and degradation by the proteasome. KEAP1 contains an amino terminal BTB/POZ domain and a carboxyl terminal KELCH domain which are required for interaction with NRF2, and in binding Cul3-E3 ubiquitin ligase. Altered expression of NRF2 is associated with chronic obstructive pulmonary disease (COPD). KEAP1 also targets the down regulation of NF-kappaB activity by targeting IKKbeta degradation. Mutation of the KEAP1 gene is found in lung cancer.

Overview

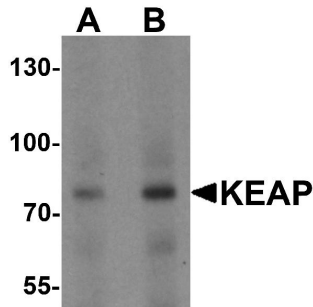
Product Name	Anti-KEAP1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-KEAP1 Antibody (Catalog # A00514). Tested in ELISA, WB, IF applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IF, WB
Clonality	Polyclonal Clone: SK7
Formulation	KEAP1 Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	KEAP1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	Q14145

Technical Details

Immunogen	Anti-KEAP1 antibody was raised against a 19 amino acid synthetic peptide near the carboxy terminus of human KEAP1. The immunogen is located within the last 50 amino acids of KEAP1.
Predicted Reactive Species	Pig
Cross Reactivity	At least two isoforms of KEAP1 are known to exist.
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL

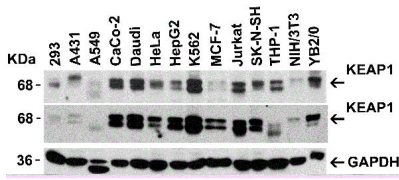
Purification	KEAP1 Antibody is affinity chromatography purified via peptide column.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: WB: 1-2 ug/mL; IF: 20 ug/mL. Antibody validated: Western Blot in human, mouse and rat samples; Immunofluorescence in human samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.

Anti-KEAP1 Antibody (A00514) Images



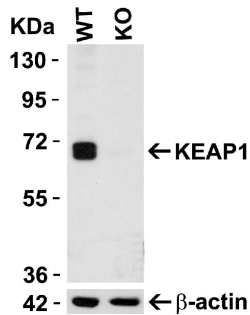
Western Blot Validation of KEAP1 in Human Lung

Loading: 15 ug of lysates per lane. Antibodies: KEAP1 A00514 (A: 1 ug/mL; B: 2 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



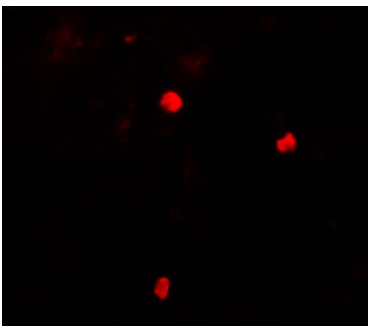
Independent Antibody Validation (IAV) via Protein Expression Profile in Cell Lines

Loading: 15 ug of lysates per lane. Antibodies: KEAP1 A00514 (2 ug/mL), KEAP1 (2 ug/mL, and GAPDH (0.02 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



KO Validation in HeLa cells

Loading: 10 ug of HeLa WT cell lysates or KEAP1 KO cell lysates. Antibodies: KEAP1 A00514 (2 ug/mL) and beta-actin (1 ug/mL), 1 h incubation at RT in 5% NFDm/TBST. Secondary: Goat Anti-Rabbit IgG HRP conjugate at 1:10000 dilution.



Immunofluorescence Validation of KEAP1 in Human Lung

Immunofluorescent analysis of 4% paraformaldehyde-fixed human lung tissue labeling KEAP1 with A00514 at 20 ug/mL

1 Publications Citing This Product

1. PubMed ID: 33359640, Li D, Bai X, Jiang Y, Cheng Y. Butyrate alleviates PTZ-induced mitochondrial dysfunction, oxidative stress and neuron apoptosis in mice via Keap1/Nrf2/HO-1 pathway. Brain Res Bull. 2020 Dec 28;168:25-35. doi:10.1016/j.brainresbull.2020.12.009. Epub ahead of print

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