

Recombinant Mouse Keap1 Protein, Myc/DDK-tagged

Cat. No. Keap1-3686M Lot. No. (See product label)

SPECIFICATION

Product Overview Purified recombinant protein of mouse full-length kelch-like ECH-associated protein 1 (Keap1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

Species Mouse

Source HEK293

Description 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. 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. 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. 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. The BCR(KEAP1) complex also mediates ubiquitination of SQSTM1/p62, increasing SQSTM1/p62 sequestering activity and degradation. The BCR(KEAP1) complex also targets BPTF and PGAM5 for ubiquitination and degradation by the proteasome.

Molecular Mass 69.6 kDa

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Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Keap1 kelch-like ECH-associated protein 1 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Keap1
Synonyms	KEAP1; kelch-like ECH-associated protein 1; ring canal protein; NRF2 cytosolic inhibitor; cytosolic inhibitor of Nrf2; INRF2; mKIAA0132
Gene ID	50868
mRNA Refseq	NM_001110307
Protein Refseq	NP_001103777
UniProt ID	Q9Z2X8

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