KEAP1 Blocking Peptide

PRODUCT OVERVIEW

Product Name	KEAP1, Blocking Peptide
Full Product Name	KEAP1 Blocking Peptide
Product Gene Name	KEAP1 blocking peptide
Product Synonym Names	KEAP1; kelch-like ECH-associated protein 1; INrf2; KIAA0132; KLHL19; MGC10630; MGC1114; MGC20887; MGC4407; MGC9454; cytosolic inhibitor of Nrf2; kelch-like protein 19
Species Reactivity	Human
Form/Format	100ug of Lyophilised peptide, formulation 5pmol/uL in 5% (v/v) acetonitrile/H2O.
Preparation and Storage	Store at -20 degree C.
OMIM	606016
Peptide Sequence + C	C-NNSPDGNTDSSALD
Reconstitution	Reconstitute pellet in distilled water where required. For Blocking studies, reconstitute pellet in 200ul distilled water to obtain a 0.5mg/ml peptide solution.
ISO Certification	Manufactured in an ISO 9001:2008 Certified Laboratory.
Related Product Information for KEAP1 blocking peptide	MBS428898 is a blocking peptide targeting KEAP1. Reactive in Human.
Other Notes	Small volumes of KEAP1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for KEAP1. It may not necessarily be applicable to this product.

NCBI GI #	22027642
NCBI GeneID	9817
NCBI Accession #	NP_036421.2
UniProt Primary Accession #	Q14145
UniProt Related Accession #	Q14145
GenBank Nucleotide #	NP_036421.2
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
UniProt Protein Name	Kelch-like ECH-associated protein 1
UniProt Synonym Protein Names	Cytosolic inhibitor of Nrf2; INrf2; Kelch-like protein 19
Protein Family	Kelch-like ECH-associated protein

UniProt Gene Name	KEAP1
UniProt Synonym Gene Names	INRF2; KIAA0132; KLHL19; INrf2
UniProt Entry Name	KEAP1_HUMAN
NCBI Protein Information	kelch-like ECH-associated protein 1
NCBI Summary for KEAP1	This gene encodes a protein containing KELCH-1 like domains, as well as a BTB/POZ domain. Kelch-like ECH-associated protein 1 interacts with NF-E2-related factor 2 in a redox-sensitive manner and the dissociation of the proteins in the cytoplasm is followed by transportation of NF-E2-related factor 2 to the nucleus. This interaction results in the expression of the catalytic subunit of gamma-glutamylcysteine synthetase. Two alternatively spliced transcript variants encoding the same isoform have been found for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for KEAP1	KEAP1: a substrate adapter protein for the E3 ubiquitin ligase complex formed by CUL3 and RBX1. Has tumor suppressor activity. Retains NRF2, BPTF and PGAM5 in the cytosol. Targets NRF2 for ubiquitination and degradation by the proteasome, thus resulting in the suppression of its transcriptional activity and of antioxidant response element-mediated detoxifying enzyme gene expression. Somatic mutations of KEAP1 or NRF2 commonly occur in solid cancers, irrespective of histological type, resulting in the constitutive transcription of cytoprotective genes. Genetic disruption of the KEAP1/CUL3 E3 ubiquitin ligase complex leads to the activation of the NF-kappaB pathway in lung cancer. Alternative activation of the cytoprotective NRF2 pathway exist in the absence of mutations in KEAP1 and HRF2: WTX, PALB2, SQSTM1, and DPP3 can competitively bind KEAP1. These proteins and others that bind KEAP1 contain an Â¿ETGEÂ¿ amino acid motif, which matches the KEAP1 interaction motif found in NRF2. Binding of these Â¿ETGEÂ¿-containing proteins can displace NRF2, freeing it to translocate to the nucleus and implement its cytoprotective transcriptional pathway. The DPP3 gene is frequently overexpressed in squamous cell lung carcinomas with high wt NRF2 activity. Its expression level significantly correlates with the response rate and progression-free survival of platinum-based first-line chemotherapy. May be a useful biomarker for predicting the chemosensitivity of patients with advanced-stage NSCLC. Broadly expressed, with highest levels in skeletal muscle. Ubiquitination and subsequent degradation of PGAM5 is inhibited by oxidative stress and sulforaphane. Protein type: Ubiquitin conjugating system; Transcription regulation; Motility/polarity/chemotaxis; Endoplasmic reticulum Chromosomal Location of Human Ortholog: 19p13.2 Cellular Component: nucleoplasm; endoplasmic reticulum; cytoplasm; microtubule organizing center; midbody; cytosol Molecular Function: protein binding; transcription factor binding Biological Process: transcription, DNA-dependent; in utero embryonic development; positive regulation of proteasomal ubiquitin-dependent protein catabolic process; negative regulation of transcription factor activity; proteasomal ubiquitin-independent protein catabolic process; protein ubiquitination; regulation of epidermal cell differentiation
Research Articles on KEAP1	**1.** Identified mutations in KEAP1 associated with Nrf2 overexpression in papillary thyroid carcinoma. Mutations favored disruption of inhibitory interaction Nrf2-Keap1 to enable increased antioxidant Nrf2 activity, possibly with prognostic consequences.
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