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Recombinant Human KEAP1 Protein

Catalog No.: RP02850 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	9817	Q14145

Tags
No tag

Synonyms
INrf2; KLHL19

Product Information

Source	Purification
Baculovirus-Insect Cells	≥ 85 % as determined by SDS-PAGE.

Calculated MW	Observed MW
69.7 kDa	64 kDa

Endotoxin
< 1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of 20mM Tris, 500mM NaCl, 3mM DTT, 10% glycerol, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Kelch-like ECH-associated protein 1, also known as a cytosolic inhibitor of Nrf2, Kelch-like protein 19, KEAP1, and INRF2, is a cytoplasm and nucleus protein that contains one BACK (BTB/Kelch associated) domain, one BTB (POZ) domain, and six Kelch repeats. KEAP1 / INRF2 is broadly expressed, with the highest levels in skeletal muscle. KEAP1 / INRF2 is a key regulator of the NRF2 transcription factor, which transactivates the antioxidant response element (ARE) and upregulates numerous proteins involved in antioxidant defense. Under basal conditions, KEAP1 / INRF2 targets NRF2 for ubiquitination and proteolytic degradation and as such is responsible for the rapid turnover of NRF2. KEAP1 / INRF2 retains NFE2L2 / NRF2 in the cytosol. KEAP1 / INRF2 functions as a substrate adapter protein for the E3 ubiquitin ligase complex formed by CUL3 and RBX1. It 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. KEAP1 / INRF2 may also retain BPTF in the cytosol. It targets PGAM5 for ubiquitination and degradation by the proteasome.

Basic Information

Description
Recombinant Human KEAP1 Protein is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Gln2-Cys624) of human KEAP1 (Accession #NP_036421.2) fused with no additional amino acid.

Bio-Activity

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

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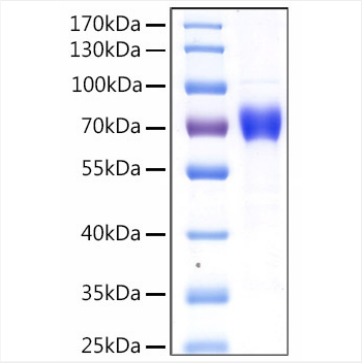
Validation Data



Recombinant Human KEAP1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.

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