

Human KEAP1 / INRF2 Protein (His & GST & AVI Tag)

Catalog Number: 11981-H29B



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Biological Solution Specialist

General Information

Gene Name Synonym:

INRF2; KEAP-1; KLHL19

Protein Construction:

A DNA sequence encoding the human KEAP1 (Q14145) (Gln 2-Cys 624) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus linked by the AVI tag.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human KEAP1/GST chimera consists of 875 amino acids and has a calculated molecular mass of 99.2 kDa. It migrates as an approximately 85 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% gly, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

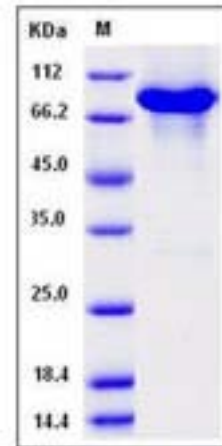
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Kelch-like ECH-associated protein 1, also known as cytosolic inhibitor of Nrf2, Kelch-like protein 19, KEAP1 and INRF2, is a cytoplasm and nucleus protein which contains one BACK (BTB/Kelch associated) domain, one BTB (POZ) domain and six Kelch repeats. KEAP1 / INRF2 is broadly expressed, with 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 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.

References

1. Strachan GD. et al., 2004, Biochemistry. 43: 12113-22. 2. Zhang DD. et al., 2004, Mol Cell Biol. 24: 10941-53. 3. Zhang DD. et al., 2003, Mol Cell Biol. 23: 8137-51.

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