



Recombinant Protein Technical Manual

Recombinant Human KEAP1/INRF2 Protein

RPES4295

Product Data:

Product SKU: RPES4295

Size: 50µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: Q14145

Protein Information:

Molecular Mass: 69.7 kDa

AP Molecular Mass: 64 kDa

Tag:

Bio-activity:

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile 20mM Tris, 500mM NaCl, 3mM DTT, 10% glycerol, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: INRF2;KEAP;KLHL19

Immunogen Information:

Sequence: Gln2-Cys624

Background:

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.