

Recombinant Mouse Ern1 Protein, Myc/DDK-tagged

Cat. No. Ern1-2864M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length endoplasmic reticulum (ER) to nucleus signalling 1 (Ern1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	Serine/threonine-protein kinase and endoribonuclease that acts as a key sensor for the endoplasmic reticulum unfolded protein response (UPR). In unstressed cells, the endoplasmic reticulum luminal domain is maintained in its inactive monomeric state by binding to the endoplasmic reticulum chaperone HSPA5/BiP. Accumulation of misfolded protein in the endoplasmic reticulum causes release of HSPA5/BiP, allowing the luminal domain to homodimerize, promoting autophosphorylation of the kinase domain and subsequent activation of the endoribonuclease activity. The endoribonuclease activity is specific for XBP1 mRNA and excises 26 nucleotides from XBP1 mRNA. The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes. Acts as an upstream signal for ER stress-induced GORASP2-mediated unconventional (ER/Golgi-independent) trafficking of CFTR to cell membrane by modulating the expression and localization of SEC16A.
Molecular Mass	110.6 kDa

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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	Ern1 endoplasmic reticulum (ER) to nucleus signalling 1 [Mus musculus (house mouse)]
Official Symbol	Ern1
Synonyms	ERN1; endoplasmic reticulum (ER) to nucleus signalling 1; serine/threonine-protein kinase/endoribonuclease IRE1; ire1-alpha; inositol-requiring 1 alpha; inositol-requiring protein 1; endoplasmic reticulum-to-nucleus signaling 1; Ire1a; Ire1p; C85377; AI225830; Ire1alpha; 9030414B18Rik
Gene ID	78943
mRNA Refseq	NM_023913
Protein Refseq	NP_076402
UniProt ID	Q9EQY0

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