

## Anti-Phospho-ERN1 (Ser724) Antibody (1J294)

## Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	1J294
Purification:	Affinity-chromatography

## Applications

Verified Activity:	1. Western Blot -Positive WB detected in: 293 whole cell lysate, A549 whole cell lysate, HeLa whole cell lysate (treated with Calyculin A or EGF) -All lanes: Phospho-ERN1 antibody at 0.75µg/ml -Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution -Predicted band size: 110 kDa -Observed band size: 110 kDa
	2. Immunofluorescence staining of HeLa cells with TMAH-00896 at 1:100, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).
Application:	ELISA, WB, IF
Recommended	WB:1:500-1:5000; IF:1:20-1:200.

## Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

## Antigen Details

Immunogen:	A synthetic peptide: Human Phospho-ERN1 (S724)
Antigen Species:	Human
Gene ID:	2081
Uniprot ID:	O75460
Synonyms:	ERN1 (p-Ser724);p-ERN1 (Ser724);p-ERN1 (S724);hIRE1p;endoplasmic reticulum to nucleus signaling 1;IRE1P;Phospho-ERN1 (S724);ERN1 (p-S724);IRE1;IRE1a
Biology Area:	Signal Transduction

## Research Background

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

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misfolded proteins 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.

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