ABCLONAL BIOTECHNOLOGY,INC.

IRE1α Rabbit pab Antibody

Anti IRE1α antibody

Catalog Number:	A0615	**Quantity:**	100ul
Lot Number:	A00009	**Species:**	Rabbit
Gene ID:	2081	**Swiss Prot:**	O75460

DESCRIPTION

Description Rabbit polyclonal to Human IRE1α
Species Rabbit
Applications WB IHC IF FC
Reactivity H
Immunogen A synthetic peptide of human IRE1α
Other Name IRE1; IRE1P; IRE1a; hIRE1p; FLJ30999; MGC163277; MGC163279; ERN1

PROPERTIES

Form Liquid
Storage instructions Upon delivery aliquot and store at -20ºC or -80ºC.
Storage buffer PBS with 0.1% Sodium Azide, 50% Glycerol,
Purity Affinity purification
Clonality Polyclonal
Isotype IgG

APPLICATION

WB WB :1/500-1000
IHC IHC: 1/50-100
IF IF: 1/50-100
FC FC: 1/50-100

BACKGROUND

The secretory, intra-organellar and transmembrane proteins translocate into the endoplasmic reticulum (ER) after their synthesis. Inside the ER, they are post-translationally modified and properly folded. Disruptions of ER homeostasis leads to the accumulation of unfolded proteins (1). The ER has developed an adaptive mechanism called unfolded protein response (UPR) to counteract compromised protein folding (1). One of the players in UPR, IRE1, was first identified in *Saccharomyces cerevisiae* as a transmembrane serine/threonine kinase (2-4). This kinase was proposed to be a proximal sensor for UPR that transmits the unfolded protein signal across the ER membrane (3,4). A human homolog of this kinase, IRE1α, was later identified and shown to be ubiquitously expressed in human tissues (5). Upon activation of UPR, IRE1α splices X-box binding protein (XBP1) mRNA by an unconventional mechanism using its endoribonuclease activity (6). This converts XBP1 into a potent transcriptional activator that induces many UPR responsive genes (6). Recently, IRE1α was shown to mediate the rapid degradation of certain mRNAs based on the ER-localization and primary sequences of their encoded proteins, suggesting a novel mechanism in UPR (7).

1. Kaufman, R.J. et al. (2002) *Nat Rev Mol Cell Biol* 3, 411-421.
2. Nikawa, J. and Yamashita, S. (1992) *Mol. Microbiol.* 6, 1441-1446.
3. Cox, J.S. et al. (1993) *Cell* 73, 1197-1206.
4. Mori, K. et al. (1993) *Cell* 74, 743-756.
5. Tirasophon, W. et al. (1998) *Genes Dev.* 12, 1812-1824.
6. Lee, K. et al. (2002) *Genes Dev.* 16, 452-466.
7. Hollien, J. and Weissman, J.S. (2006) *Science* 313, 104-107