

## XBP-1 Polyclonal Antibody

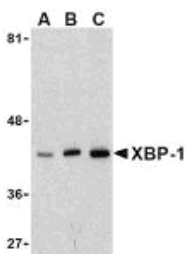
Product Specifications	
<b>Catalog Number:</b>	905-739-100
<b>Host:</b>	Rabbit
<b>Species Reactivity:</b>	Human
<b>Applications:</b> <i>The optimal dilution for a specific application must be determined by the investigator</i>	<b>WB:</b> 1-2 µg/mL <b>ICC:</b> 10 µg/mL
<b>Predicted m.w:</b>	~43 kDa
<b>Concentration:</b>	See product label
<b>Purification:</b>	Peptide Affinity
<b>Format:</b>	PBS, 0.02% sodium azide
<b>Storage:</b> <i>Shipping conditions may differ from the recommended storage temperature</i>	Store at 4°C
<b>Immunogen:</b>	Synthetic peptide corresponding to sequence near the amino-terminus of human XBP-1
<b>Related Products:</b>	
905-727-100	IRE1p Polyclonal Antibody
905-729-100	ATF6 Polyclonal Antibody
KAP-CP130	eIF2a Polyclonal Antibody
KAP-CP131	eIF2a (phospho-Ser52) Polyclonal Antibody
KAP-CP132	eIF-4E (phospho-Ser209) Polyclonal Antibody

### Background:

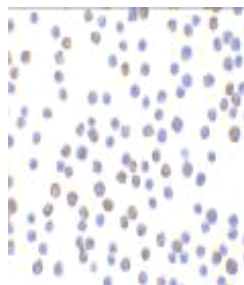
X box binding protein 1 (XBP-1) is a key protein in the mammalian unfolded protein response (UPR) that protects the cell against the stress of malformed proteins in the endoplasmic reticulum (ER)<sup>1</sup>. Upon sensing unfolded proteins, an ER transmembrane endonuclease and kinase termed IRE1p is activated, and excises an intron from XBP-1 mRNA<sup>2</sup>. The spliced XBP-1 mRNA results in a 371 amino acid protein (XBP-1s) which is translocated to the nucleus where it binds to the regulatory elements of downstream genes. Together with other UPR transcription factors such as ATF6, XBP-1 stimulates the production of ER stress proteins including the ER resident protein chaperones glucose regulated protein (GRP) 78 and GRP94<sup>3,4</sup>.

#### References:

1. Yoshida, H., *et al.* (2001) *Cell* **107**, 881-891.
2. Calton, M., *et al.* (2002) *Nature* **415**, 92-96.
3. Haze, K., *et al.* (1999) *Mol. Cell. Biol.* **10**, 3787-3799.
4. Little, E., *et al.* (1994) *Crit Rev Eukaryot Gene Expr.* **4**, 1-18.



Western blot analysis of HepG2 cell lysate with XBP-1 Polyclonal Antibody at (A) 1, (B) 2 and (C) 4 µg/mL.



Immunocytochemistry of HepG2 cells with XBP-1 Polyclonal Antibody at 10 µg/mL.