

XBP1 Monoclonal Antibody (3H1G4)

Catalog NumberMA5-15767

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Human, Mouse, Rat
Host/Isotope	Mouse / IgG1	Tested Applications	
Class	Monoclonal	Western Blot (WB)	1 µg/mL
Type	Antibody	Immunocytochemistry (ICC/IF)	2-5 µg/mL
Clone	3H1G4	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Immunogen	Recombinant protein corresponding to amino acids 2 to 160 of human XBP-1.		
Conjugate	Unconjugated		
Form	Liquid		
Concentration	1 mg/mL		
Purification	Protein A		
Storage buffer	PBS		
Contains	0.02% sodium azide		
Storage Conditions	-20°C		

Product specific information

A suggested positive control is XBP-1 recombinant protein.

Background/Target Information

XBP1 encodes a transcription factor that regulates MHC class II genes by binding to a promoter element referred to as an X box. This gene product is a bZIP protein, which was also identified as a cellular transcription factor that binds to an enhancer in the promoter of the T cell leukemia virus type 1 promoter. It may increase expression of viral proteins by acting as the DNA binding partner of a viral transactivator. It has been found that upon accumulation of unfolded proteins in the endoplasmic reticulum (ER), the mRNA of this gene is processed to an active form by an unconventional splicing mechanism that is mediated by the endonuclease inositol-requiring enzyme 1 (IRE1). The resulting loss of 26 nt from the spliced mRNA causes a frame-shift and an isoform XBP1(S), which is the functionally active transcription factor. The isoform encoded by the unspliced mRNA, XBP1(U), is constitutively expressed, and thought to function as a negative feedback regulator of XBP1(S), which shuts off transcription of target genes during the recovery phase of ER stress. A pseudogene of XBP1 has been identified and localized to chromosome 5.

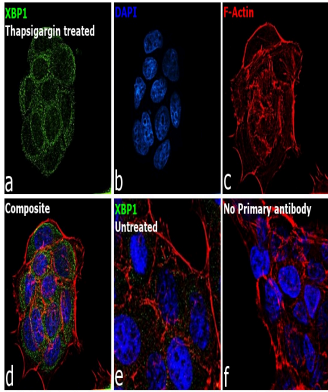
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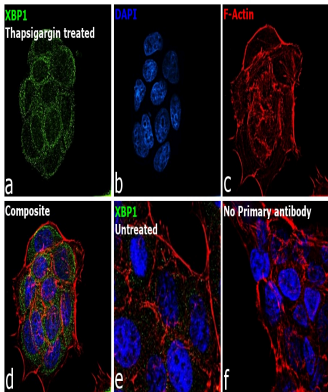
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Product Images For XBP1 Monoclonal Antibody (3H1G4)



XBP1 Antibody (MA5-15767) in ICC/IF

Immunofluorescence analysis of XBP1 was performed using 70% confluent log phase MCF-7 Thapsigargin treated cells (2uM for 6hrs). The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 2% BSA for 45 minutes at room temperature. The cells were labeled with XBP1 Monoclonal Antibody (3H1G4) (Product # MA5-15767) at 5µg/mL in 0.1% BSA, incubated at 4 degree celsius overnight and then labeled with Donkey anti-Mouse IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor Plus 488 (Product # A32766), (1:2000 dilution), for 45 minutes at room temperature (Panel a: Green). Nuclei (Panel b:Blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: Red) was stained with Rhodamine Phalloidin (Product # R415, 1:300 dilution). Panel d represents the merged image showing cytoplasmic localization with may correspond to the unspliced variant of the protein. Panel e represents untreated cells with reduced signal. Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



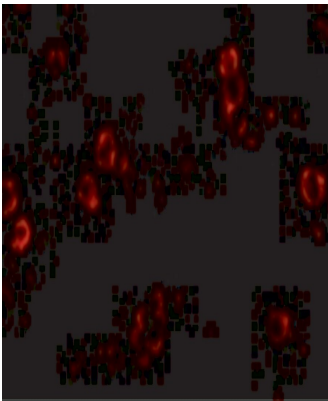
XBP1 Antibody (MA5-15767)

Detection of altered subcellular localization of the target protein by cell treatment demonstrates antibody specificity. Immunofluorescence analysis using XBP1 Monoclonal Antibody (3H1G4) (Product # MA5-15767), shows increased expression of XBP1 in Thapsigargin treated cells. {TM}



XBP1 Antibody (MA5-15767) in ICC/IF

Immunocytochemistry of XBP-1 in HepG2 cells with XBP1 Monoclonal Antibody (3H1G4) (Product # MA5-15767) at 2 µg/mL.



XBP1 Antibody (MA5-15767) in ICC/IF

Immunofluorescence of XBP1 in HepG2 cells with XBP1 Monoclonal Antibody (3H1G4) (Product # MA5-15767) at 4 µg/mL.

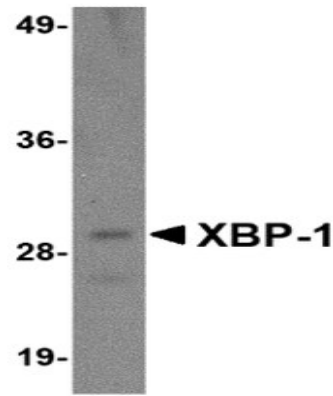
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XPB1 Antibody (MA5-15767) in WB

Western Blot analysis of 100 ng of XPB-1 recombinant protein with XPB1 Monoclonal Antibody (3H1G4) (Product # MA5-15767) at 1 µg/mL.



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