XBP1s

CONTACT INFORMATION:	Monoclonal Antibodies Unit. Centro Nacional de Investigaciones Oncológicas
STATUS:	Validated
TYPE:	mouse anti human
CLONE NAME:	143F
PROTEIN:	human XBP1s
PROTEIN WEB:	http://www.ncbi.nlm.nih.gov/protein/118640873
ANTIGEN USED:	XBP1s C-terminus (amino-acids 165-367)
FUSION PARTNER:	NS1/Ag4-1 (NS1) cells
ISOTYPE:	IgG2a
SPECIES REACTIVITY:	human
PREPARATION AND STORAGE:	Aliquot and store at 4C. Do not freeze
APP RECOMMENDED:	IHQ-paraffin, IF, WB
APP NO RECOMMENDED:	IHQ-frozen
APP NO TESTED:	IP, Flow cytometry

DESCRIPTION

Xbox binding protein-1 (XBP-1) is a transcription factor essential for plasma cell differentiation. XBP-1 is subject to alternative RNA processing, generating two mRNA transcripts encoding the same N-terminal DNA binding domain, but different C-terminal transactivation domains. The shorter spliced transcript, designated XBP-1s, possesses enhanced transactivation potential and stability relative to the product of the unspliced transcript, designated XBP-1u. Recent studies have uncovered several functions for XBP-1 and have implicated XBP-1 overexpression in human carcinogenesis and tumour growth under hypoxic conditions. Specifically, elevated XBP-1 mRNA levels have been detected in hepatocellular carcinomas and in primary ER?-positive breast tumors.

PUBLICATION DESCRIBING ANTIBODY CHARACTERIZATION/VALIDATION

Maestre L, Tooze R, Cañamero M, Montes-Moreno S, Ramos R, Doody G, Boll M, Barrans S, Baena S, Piris MA, Roncador G.
XBP1(S) provides a specific marker of stress response and plasma cell differentiation. Haematologica. 2009 Mar;94(3):419-22. Epub

2009 Jan 27. http://www.ncbi.nlm.nih.gov/pubmed/19176362

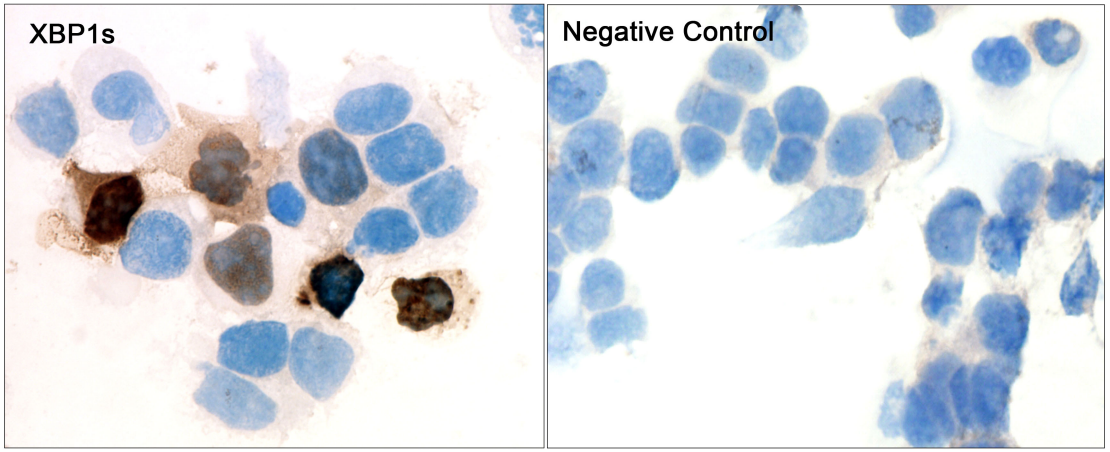
REFERENCES

Maestre L, Tooze R, Cañamero M, Montes-Moreno S, Ramos R, Doody G, Boll M, Barrans S, Baena S, Piris MA, Roncador G. XBP1(S) provides a specific marker of stress response and plasma cell differentiation. Haematologica. 2009 Mar;94(3):419-22. Epub 2009 Jan 27.

Montes-Moreno S, Gonzalez-Medina AR, Rodriguez-Pinilla SM, Maestre L, Sanchez-Verde L, Roncador G, Mollejo M, García JF, Menarguez J, Montalbán C, Ruiz-Marcellan MC, Conde E, Piris MA. Haematologica. Aggressive large B-cell lymphoma with plasma cell differentiation: immunohistochemical characterization of plasmablastic lymphoma and diffuse large B-cell lymphoma with partial plasmablastic phenotype. 2010 Aug; 95(8):1342-9.

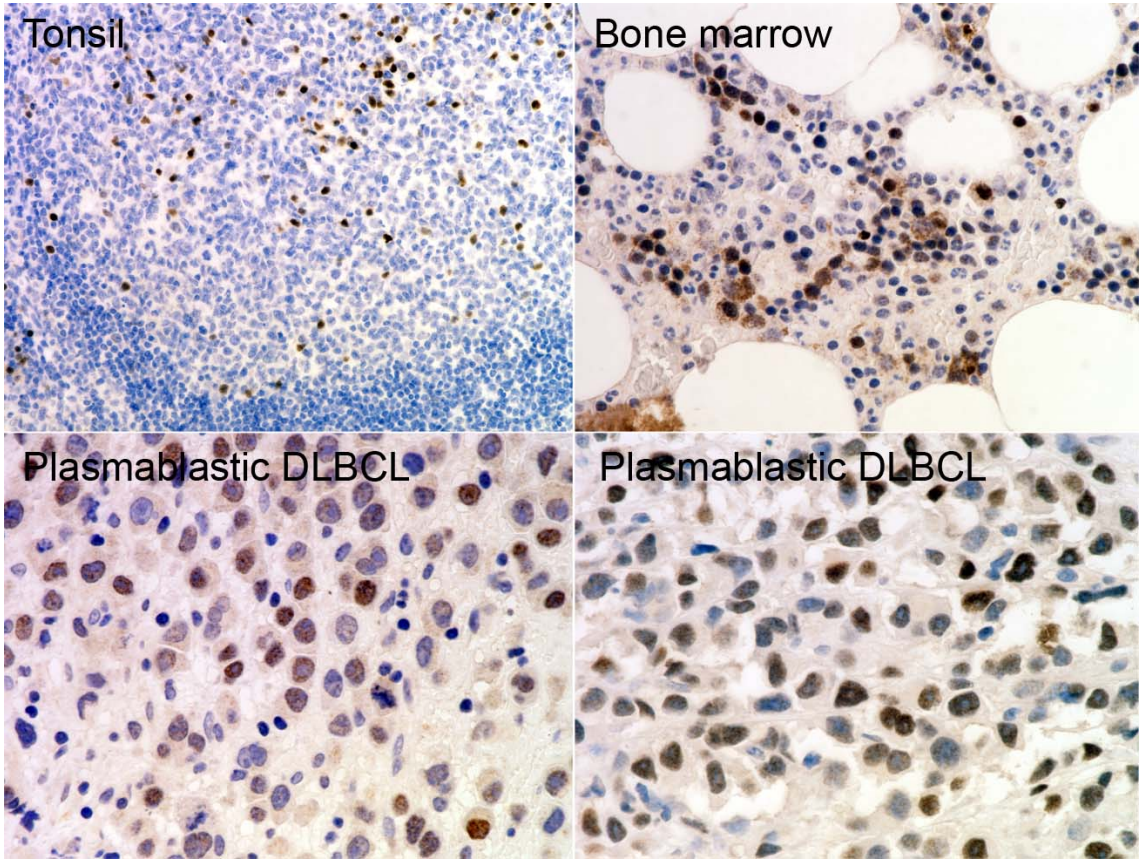
APPLICATIONS

IHC Techniques	Clone	Dilution	Antibody concentration	Antigen retrieval method	Visualization kit	Positive control	Negative control	Protein localization	Positivity in other species
Frozen tissue and cytospins									
Paraffin tissue									
Recommended	143F	1:100	supernatant	20 minutes ER2 (Tris-EDTA)	Novolink kit	Tonsil			
Immunofluorescence									
Recommended	143F		supernatant						



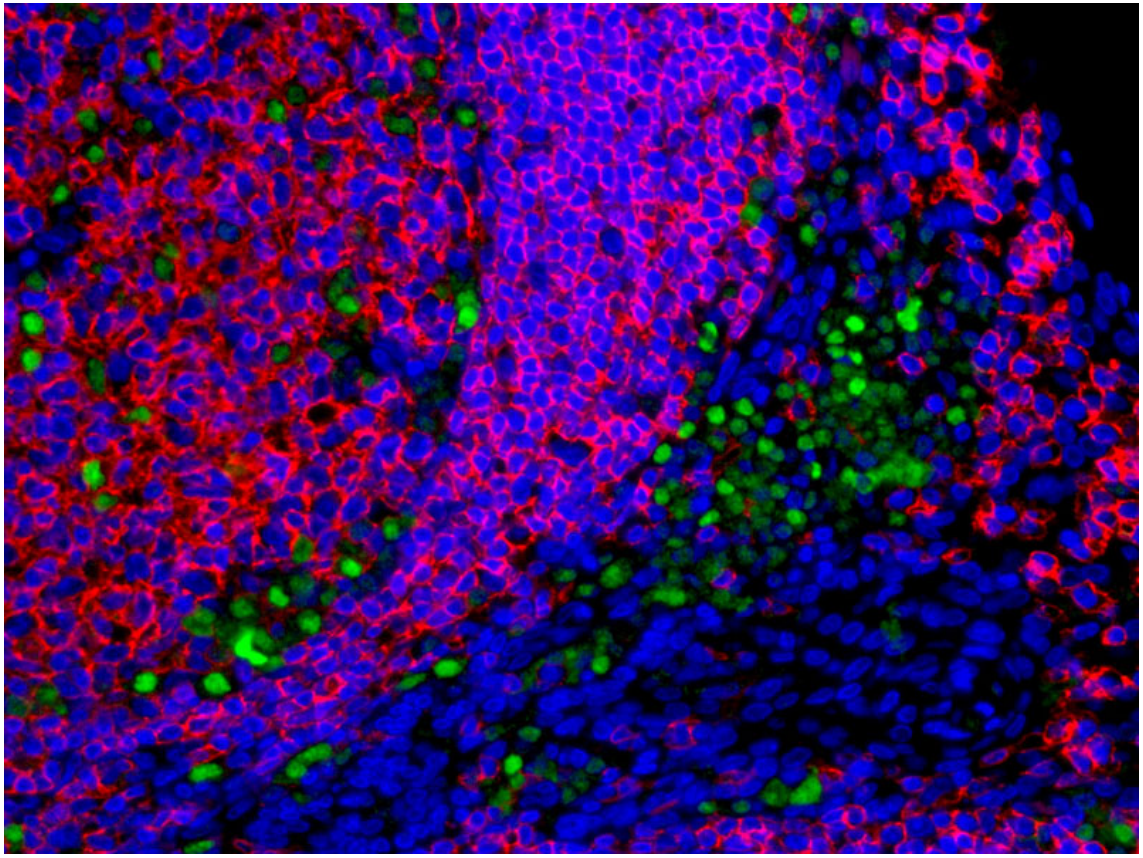
XBP1s antibody (143F) in transfected cells

Validation of 143F monoclonal antibody in Hek-GFP-XBP1s transfected cells. Another HEK transfected cells were used as negative control.



XBP1s (143F) immunohistochemistry on human paraffin sections.

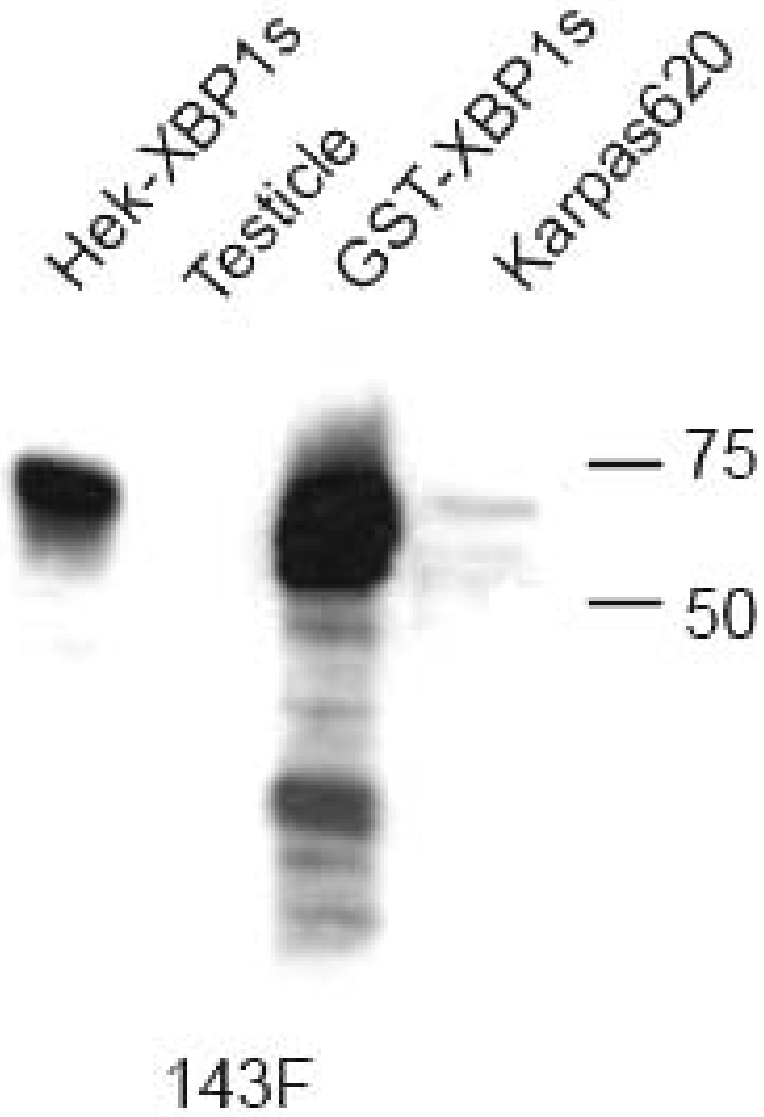
In tonsil, XBP1s protein is strongly expressed by plasma cells present in germinal center B cells and in subepithelial areas. XBP1s is also expressed in plasma cells of diferent normal tissues as bone marrow. XBP1s immunostaining of lymphoid neoplasm are represented in the images below.



Expression of XBP1s (143F) antigen by lymphoid cells.

Double immunofluorescent staining shows that many of the XBP1s positive cells (green) in the germinal center cells do not co-express CD20 antigen (red).

WB Techniques	Clone	Dilution	Antibody concentration	Positive control	Negative control	Expected MW	Observed Mw	Positivity in other species
Western Blotting								
	143F	1:10	supernatant	SK-MM-2 cell line	Ocily3 cell line		54kDa	
Immunoprecipitation								



Western blotting of XBP1s (clone143F) antibody.

Specificity of the XBP1s antibody is demonstrated by detection of a single 54 kDa band in transfectants.

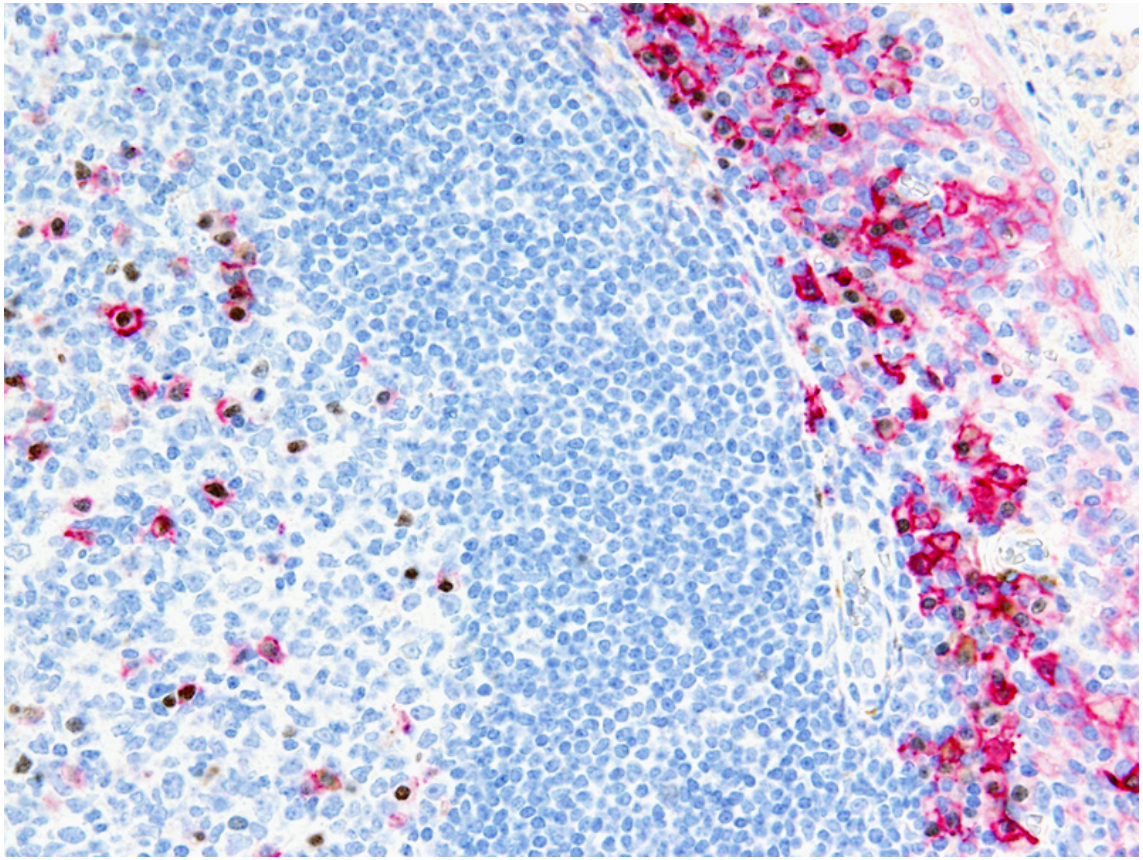
Lane 1 Hek-XBP1s trasfected cells (20ug) (+)

Lane 2 Human testicle (100ug) (-)

Lane 3 GST-XBP1s recombinant protein (0.1ug) (+)

Lane 4 Karpas 620 cell line (100ug) (+)

OTHERS	Title	Description
Recommended	Immunoenzimatic staining	



Double XBP1s/CD138 immunoenzimatic staining

Double immunoenzymatic staining shows the expression of XBP1s (brown) and CD138 (red). This reveals that the mayority of XBP1s positive cells co-express CD138.