FOXP2

CONTACT INFORMATION:	LRF Haemato-oncology Group. University of Oxford
STATUS:	Validated
TYPE:	mouse anti human
CLONE NAME:	FOXP2-73A/8
PROTEIN:	N-terminal aa 1-86 of the human FOXP2 protein
PROTEIN WEB:	http://www.ncbi.nlm.nih.gov/omim/605317
ANTIGEN USED:	Bacterially expressed GST-protein containing N-terminus of FOXP2
FUSION PARTNER:	X653
ISOTYPE:	IgG1
SPECIES REACTIVITY:	Human and mouse
PREPARATION AND STORAGE:	Aliquot and store at 4oC. Do not freeze.
APP RECOMMENDED:	IHQ-paraffin, WB
APP NO RECOMMENDED:	IHQ-frozen
APP NO TESTED:	IP, IF, Flow cytometry

DESCRIPTION

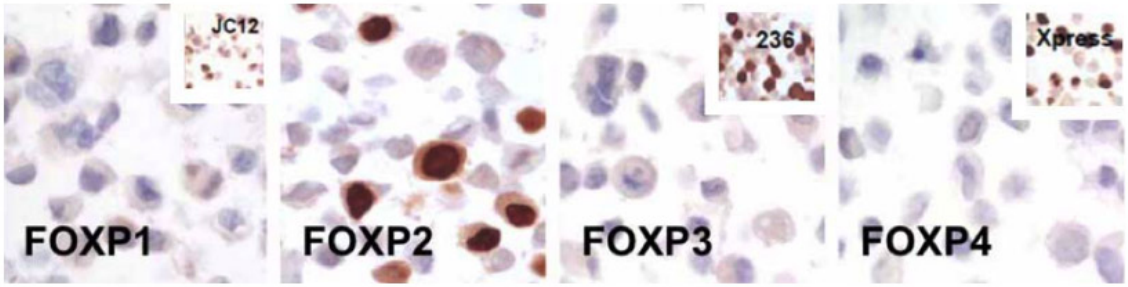
FOXP2 is a member of the forkhead transcription factor. Its mutation is associated with an inherited speech and language disorder and its biological roles have primarily been studied in neuronal tissues. FOXP2 is also aberrantly expressed in abnormal plasma cells and it may play a role in the pathogenesis of multiple myeloma. The FOXP2-73A/8 antibody detects human and murine FOXP2 and does not cross-react with other members of the FOXP family (FOXP1, FOXP3 or FOXP4).

REFERENCES

A.J. Campbell, L. Lyne, P.J. Brown, R.J. Launchbury, P.A. Bignone, J. Chi, G. Roncador, C.H. Lawrie, K. Gatter, R. Kusec and A.H. Banham, 2009. Aberrant expression of the neuronal transcription factor FOXP2 in neoplastic plasma cells. Br J Haematol. 149(2): 221-30.

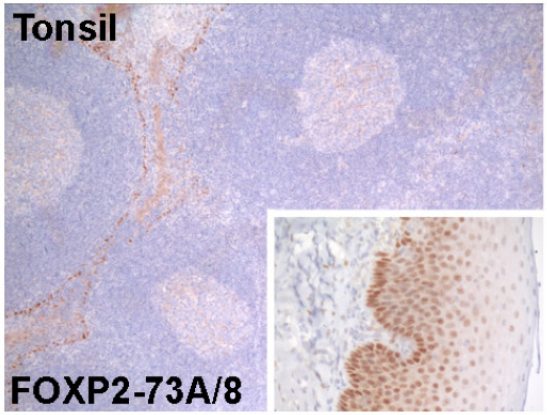
APPLICATIONS

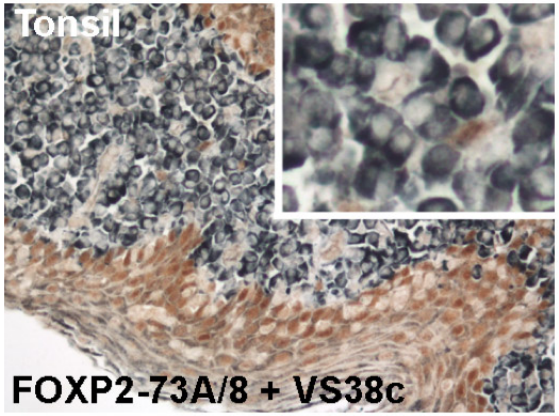
IHC Techniques	Clone	Dilution	Antibody concentration	Antigen retrieval method	Visualization kit	Positive control	Negative control	Protein localization	Positivity in other species
Frozen tissue and cytospins									
Not recommended	FOXP2-73A/8	neat	supernatant	N/A	various	tonsillar epithelium	tonsillar lymphocytes		
Paraffin tissue									
Recommended	FOXP2-73A/8	1/1000	supernatant	Tris/EDTA	Novolink	onsillar epithelium	tonsillar lymphocytes	nuclear and cytoplasmic	mouse
Immunofluorescence									



Recombinant human FOXP2 detection in transfected cells

Immunolabelling of paraffin embedded transfected COS1 cells. The anti-FOXP2 antibody FOXP2-73A/8 recognises human FOXP2 transfectants but does not stain COS1 cells transfected with the other FOXP family members. The expression of the other family members was confirmed with independent antibodies, data shown in top right corner inset panels.

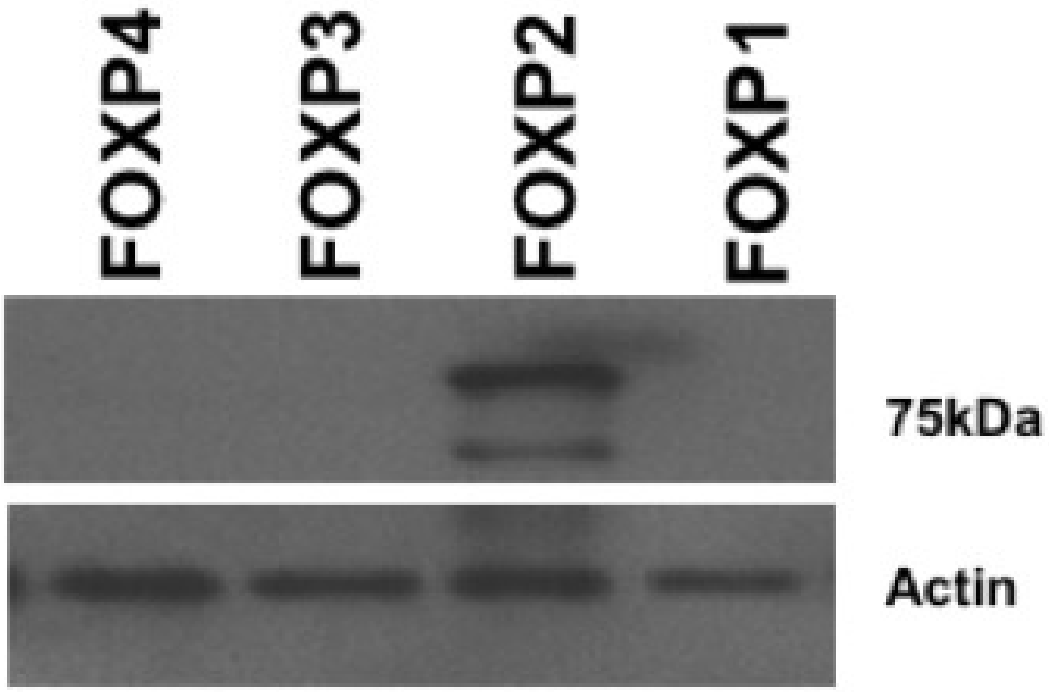




FOXP2 expression in reactive tonsil

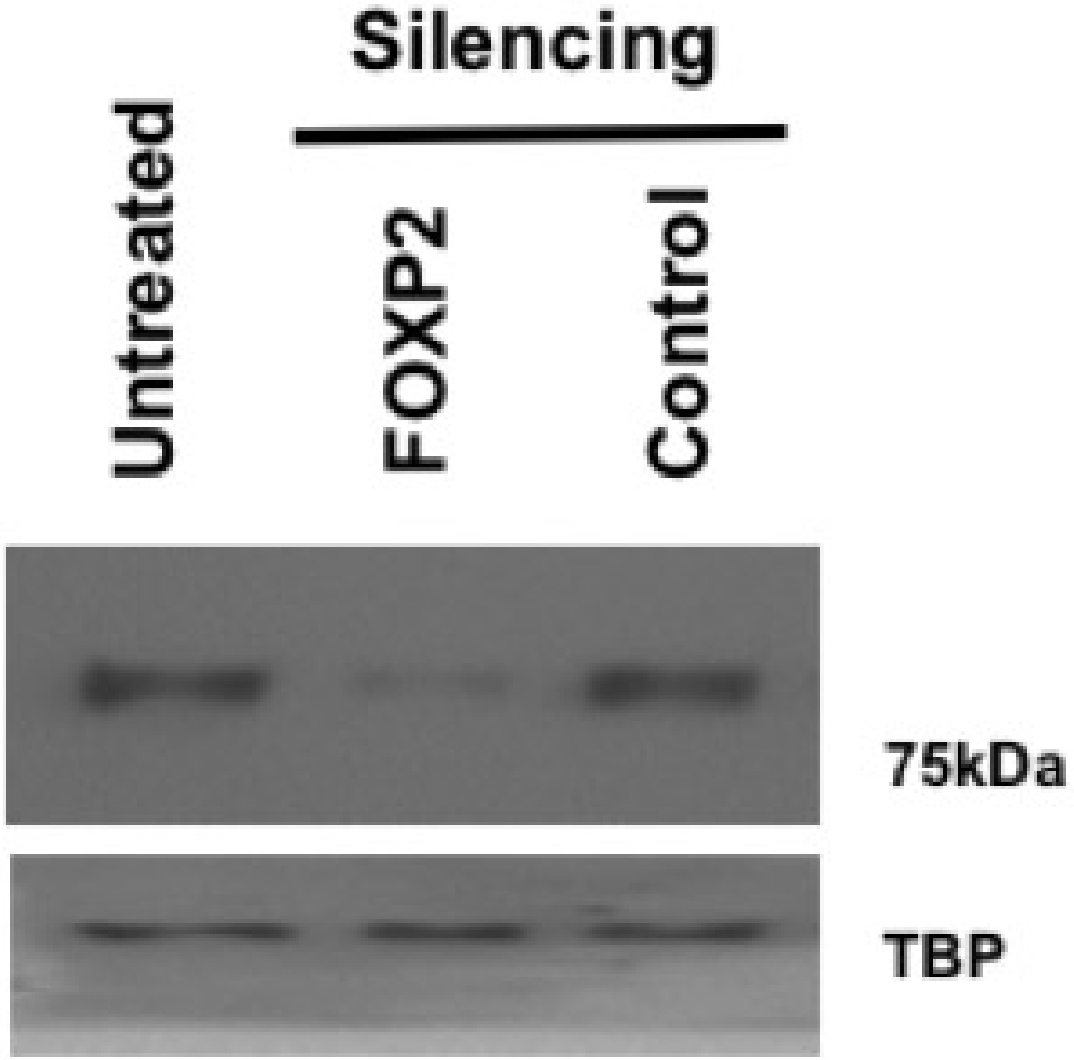
Primarily nuclear staining of paraffin embedded tonsillar epithelium is observed (left panel), although there is also some weaker cytoplasmic staining. The absence of FOXP2 expression in tonsillar plasma cells was confirmed by double labelling with VS38c shown in blue (right)

WB Techniques	Clone	Dilution	Antibody concentration	Positive control	Negative control	Expected MW	Observed Mw	Positivity in other species
Western Blotting								
Recommended	FOXP2-73A/8	1/20	supernatant	293T cells	JURKAT	79.9kDa	approx 75kDa	NT
Immunoprecipitation								



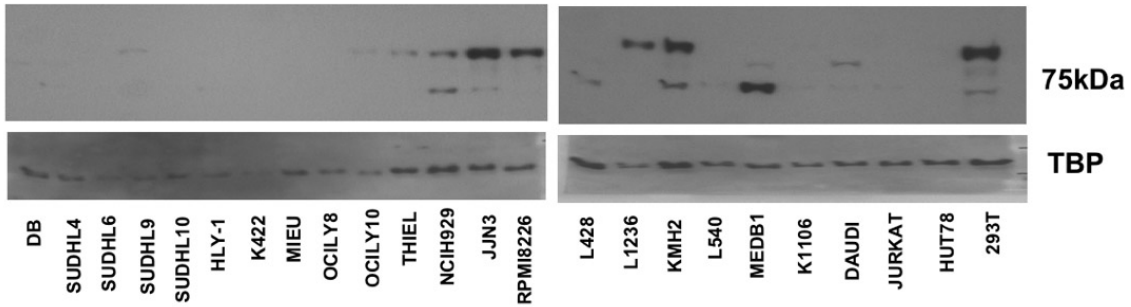
Western blotting of FOXP transfectants

Western blotting of COS1 cells transfected with members of the FOXP family. The FOXP2-73A/8 antibody exhibited specificity for the recombinant human FOXP2 protein. Expression of each family member in the same lysates was confirmed using other reagents (data not shown).



Silencing of endogenous FOXP2

Silencing using FOXP2-targeted siRNA confirmed the identity of the endogenous protein in the JJN3 cell line as FOXP2.



Western blotting in cell lines

Western blotting with FOXP2-73A/8 confirmed differential expression in a panel of cell lines derived primarily from haematological malignancies. Highest levels of full length protein expression were detected in cell lines derived from patients with multiple myeloma and those with Hodgkin\\\\\\\'s lymphoma.