

Product datasheet

Anti-FOXP2 antibody ab16046

★★★★★ 18 Abreviews 120 References 6 Images

Overview

Product name	Anti-FOXP2 antibody
Description	Rabbit polyclonal to FOXP2
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF, IHC-P
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat 
Immunogen	Synthetic peptide corresponding to Human FOXP2 aa 700 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as ab16278)
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Purity	Immunogen affinity purified
Clonality	Polyclonal

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Isotype

IgG

Applications

The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab16046 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (3)	1/1000. (see abreview)
ICC/IF	★★★★★ (2)	Use at an assay dependent concentration.
IHC-P	★★★★★ (3)	Use at an assay dependent concentration.

Target

Function

Transcriptional repressor that may play a role in the specification and differentiation of lung epithelium. May also play a role in developing neural, gastrointestinal and cardiovascular tissues. Can act with CTBP1 to synergistically repress transcription but CTPBP1 is not essential. Involved in neural mechanisms mediating the development of speech and language.

Tissue specificity

Isoform 1 and isoform 6 are expressed in adult and fetal brain, caudate nucleus and lung.

Involvement in disease

Defects in FOXP2 are the cause of speech-language disorder 1 (SPCH1) [MIM:602081]; also known as autosomal dominant speech and language disorder with orofacial dyspraxia. Affected individuals have a severe impairment in the selection and sequencing of fine orofacial movements, which are necessary for articulation. They also show deficits in several facets of language processing (such as the ability to break up words into their constituent phonemes) and grammatical skills.

Note=A chromosomal aberration involving FOXP2 is a cause of severe speech and language impairment. Translocation t(5;7)(q22;q31.2).

Sequence similarities

Contains 1 C2H2-type zinc finger.

Contains 1 fork-head DNA-binding domain.

Developmental stage

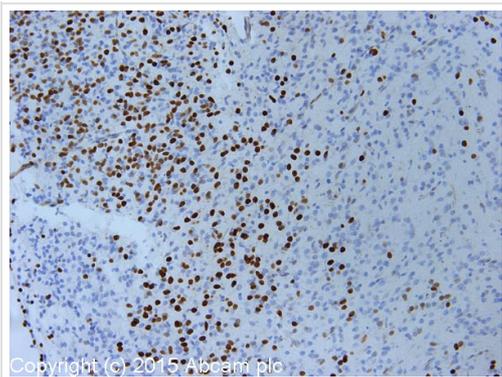
Expressed in the brain at 15 and 22 weeks of gestation, with a pattern of strong cortical, basal ganglia, thalamic and cerebellar expression. Highly expressed in the head and tail of nucleus caudatus and putamen. Restricted expression within the globus pallidus, with high levels in the pars interna, which provides the principal source of output from the basal ganglia to the nucleus centrum medianum thalami (CM) and the major motor relay nuclei of the thalamus. In the thalamus, present in the CM and nucleus medialis dorsalis thalami. Lower levels are observed in the nuclei anterior thalami, dorsal and ventral, and the nucleus parafascicularis thalami. Expressed in the ventrobasal complex comprising the nucleus ventralis posterior lateralis/medialis. The ventral tier of the thalamus exhibits strong expression, including nuclei ventralis anterior, lateralis and posterior lateralis pars oralis. Also expressed in the nucleus subthalamicus bilaterally and in the nucleus ruber.

Domain

The leucine-zipper is required for dimerization and transcriptional repression.

Cellular localization

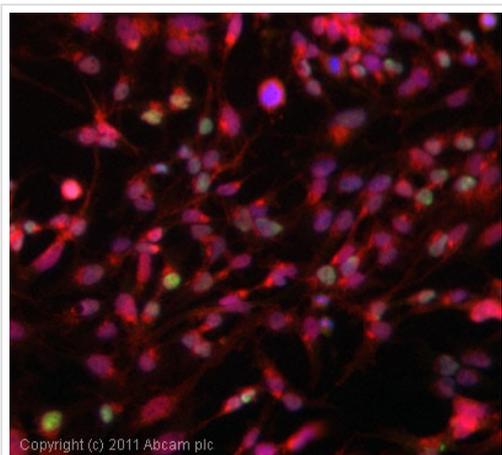
Nucleus.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXP2 antibody (ab16046)

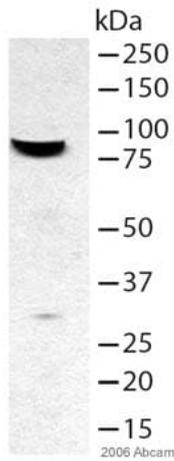
IHC image of FOXP2 staining in mouse e17 foetal brain formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab16046, 0.1µg/ml, for 15 mins at room temperature. A goat anti-rabbit biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



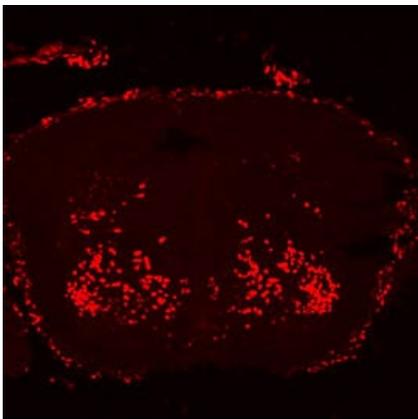
Immunocytochemistry/ Immunofluorescence - Anti-FOXP2 antibody (ab16046)

ICC/IF image of ab16046 stained HepG2 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab16046, 1µg/ml) overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-rabbit IgG - H&L, pre-adsorbed (ab96899) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Western blot - Anti-FOXP2 antibody (ab16046)
 This image is courtesy of an anonymous Abreview

ab16046 at 1/1000 detecting FOXP2 from human 293T cell lysate (whole cell) (60ug/lane) by Western Blot. An HRP conjugated goat anti-rabbit IgG was used as the secondary and ECL was used as the detection method (1 minute exposure).



Immunocytochemistry/ Immunofluorescence - Anti-FOXP2 antibody (ab16046)
 This image is courtesy of an abreview submitted by Jeremy Dasen.

Mouse spinal cord was fixed in paraformaldehyde, blocked in 1% BSA for 30 minutes then incubated with ab16046 at 1/8000 dilution for 18 hours. This image was submitted as part of a review by Jeremy Dasen.



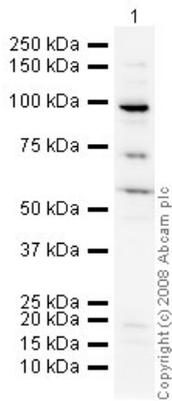
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXP2 antibody (ab16046)
 Image courtesy of Human Protein Atlas

Image courtesy of [Human Protein Atlas](http://www.proteinatlas.org)

ab16046 staining FOXP2 in human testis. Paraffin embedded human testis tissue was incubated with ab16046 (1/600 dilution) for 30 mins at room temperature. Antigen retrieval was performed by heat induction in citrate buffer pH 6.

ab16046 was tested in a tissue microarray (TMA) containing a wide range of normal and cancer tissues as well as a cell microarray consisting of a range of commonly used, well characterised human cell lines.

Further results for this antibody can be found at www.proteinatlas.org



Western blot - Anti-FOXP2 antibody (ab16046)

Anti-FOXP2 antibody (ab16046) at 1 μ g/ml + HEK293 (Human embryonic kidney cell line) Whole Cell Lysate at 10 μ g

Secondary

Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Observed band size: 90 kDa

Additional bands at: 56 kDa, 70 kDa. We are unsure as to the identity of these extra bands.

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