abcam

Product datasheet

Anti-Folate Binding Protein/FBP antibody ab67422

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Overview

Product name	Anti-Folate Binding Protein/FBP antibody
Description	Rabbit polyclonal to Folate Binding Protein/FBP
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Chicken
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Mouse cerebellum tissue lysate, JAR and HeLa cell lysates. ICC/IF: HepG2 cells.
General notes	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. 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

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 Constituent: PBS 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.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab67422 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
ICC/IF		Use a concentration of 5 µg/ml.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 28 kDa (predicted molecular weight: 30 kDa). Please note, we have been advised by some customers that ab67422 is unable to detect the human version of this protein in western blot. Please contact our scientific support services if you have any queries regarding this antibody.
IHC-P	★★★★☆ **(1)**	Use a concentration of 10 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

Function Binds to folate and reduced folic acid derivatives and mediates delivery of 5-methyltetrahydrofolate to the interior of cells.

Tissue specificity Exclusively expressed in tissues of epithelial origin. Expression is increased in malignant tissues. Expressed in kidney, lung and cerebellum.

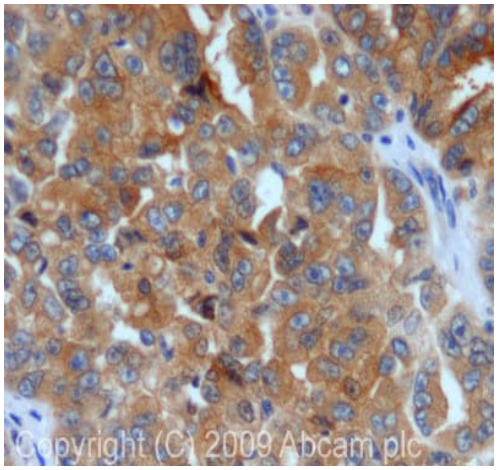
Involvement in disease Defects in FOLR1 are the cause of neurodegeneration due to cerebral folate transport deficiency (NCFTD) [MIM:613068]. NCFTD is an autosomal recessive disorder resulting from brain-specific folate deficiency early in life. Onset is apparent in late infancy with severe developmental regression, movement disturbances, epilepsy, and leukodystrophy. Note=Recognition and diagnosis of this disorder is critical because folinic acid therapy can reverse the clinical symptoms and improve brain abnormalities and function.

Sequence similarities Belongs to the folate receptor family.

Post-translational modifications Eight disulfide bonds are present.
The secreted form is derived from the membrane-bound form either by cleavage of the GPI anchor, or/and by proteolysis catalyzed by a metalloprotease.

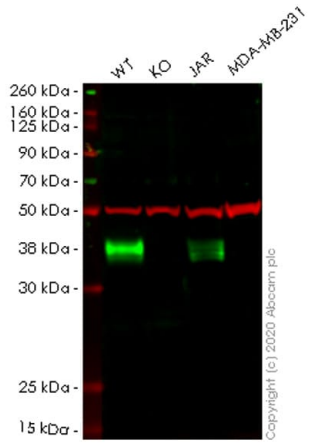
Cellular localization Cell membrane. Secreted.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Folate Binding Protein/FBP antibody (ab67422)

IHC image of Folate Binding Protein/FBP staining in human kidney carcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. 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 ab67422, 10µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Western blot - Anti-Folate Binding Protein/FBP antibody (ab67422)

All lanes : Anti-Folate Binding Protein/FBP antibody (ab67422) at 1/500 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : FOLR1 knockout HeLa cell lysate
Lane 3 : JAR cell lysate
Lane 4 : MDA-MB-231 cell lysate

Lysates/proteins at 20 µg per lane.

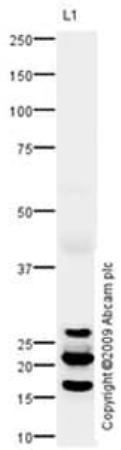
Performed under reducing conditions.

Predicted band size: 30 kDa
Observed band size: 38 kDa

Lanes 1-4: Merged signal (red and green). Green - ab67422 observed at 38 kDa. Red - loading control, **ab7291** observed at 52 kDa.

ab67422 Anti-Folate Binding Protein/FBP antibody was shown to specifically react with Folate Binding Protein/FBP in wild-type HeLa

cells. Loss of signal was observed when knockout cell line **ab264921** (knockout cell lysate **ab257270**) was used. Wild-type and Folate Binding Protein/FBP knockout samples were subjected to SDS-PAGE. ab67422 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) were incubated overnight at 4°C at 1 in 500 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 10000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Folate Binding Protein/FBP antibody (ab67422)

Anti-Folate Binding Protein/FBP antibody (ab67422) at 1/1 dilution + Cerebellum Mouse Tissue Lysate at 10 µg

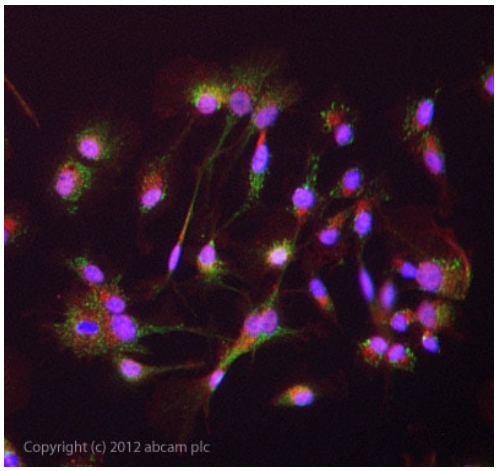
Secondary
Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 30 kDa
Observed band size: 28 kDa
Additional bands at: 16 kDa (possible cleavage fragment), 22 kDa (possible cleavage fragment)

We hypothesize that the 28, 22 and 16 kDa bands represent the propeptide with signal sequence, propeptide without signal sequence and mature protein, respectively.



Immunocytochemistry/ Immunofluorescence - Anti-Folate Binding Protein/FBP antibody (ab67422)

ab67422 stained HepG2 cells. The cells were 4% formaldehyde 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 ab67422 at 5µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- rabbit (**ab96899**) IgG (H+L) used at a 1/1000 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.

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