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BPTF Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1553a

Product Information

Application	WB, E
Primary Accession	Q12830
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2F10
Isotype	IgG2b
Calculated MW	338262
Description	BPTF (bromodomain and PHD domain transcription factor) is the largest subunit of the ATP-dependent chromatin-remodelling complex, NURF (nucleosome remodelling factor). NURF catalyses ATP-dependent nucleosome sliding and facilitates transcription. BPTF recognises histone H3 tails that are tri-methylated at K4, which marks the transcriptional start site of the vast majority of transcriptionally active genes. BPTF also exhibits some binding to H3 di-methylated at K4. BPTF plays a key role in the development of early mouse embryos, possibly through regulation of the Smad pathway of transcription factors. While BPTF is expressed in low levels in the adult brain and spinal cord, it is expressed in higher levels in the brain in neurodegenerative diseases. It is present in a subset of amyloid-containing plaques in the brains of patients suffering from Alzheimer's disease. Abundantly expressed in the fetal brain. Present throughout the gray and white matter of the developing spinal cord at 18-22 gestational weeks. Expressed at low levels in adult brain and spinal cord and reexpressed in neurodegenerative diseases (at protein level) .Tissue specificity: Ubiquitously expressed, with highest levels in testis. Present in kidney, liver and brain. In the brain, highest levels are found in motor cortex (at protein level).
Immunogen	Purified recombinant fragment of human BPTF expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2186
Other Names	Nucleosome-remodeling factor subunit BPTF, Bromodomain and PHD finger-containing transcription factor, Fetal Alz-50 clone 1 protein, Fetal Alzheimer antigen, BPTF, FAC1, FALZ
Dilution	WB~~1/500 - 1/2000 E~~1/10000

Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	BPTF Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BPTF
Synonyms	FAC1, FALZ
Function	Regulatory subunit of the ATP-dependent NURF-1 and NURF-5 ISWI chromatin remodeling complexes, which form ordered nucleosome arrays on chromatin and facilitate access to DNA during DNA-templated processes such as DNA replication, transcription, and repair (PubMed:14609955, PubMed:28801535). The NURF-1 ISWI chromatin remodeling complex has a lower ATP hydrolysis rate than the NURF-5 ISWI chromatin remodeling complex (PubMed:28801535). Within the NURF-1 ISWI chromatin-remodeling complex, binds to the promoters of En1 and En2 to positively regulate their expression and promote brain development (PubMed:14609955). Histone-binding protein which binds to H3 tails trimethylated on 'Lys-4' (H3K4me3), which mark transcription start sites of active genes (PubMed:16728976, PubMed:16728978). Binds to histone H3 tails dimethylated on 'Lys-4' (H3K4Me2) to a lesser extent (PubMed:16728976, PubMed:16728978, PubMed:18042461). May also regulate transcription through direct binding to DNA or transcription factors (PubMed:10575013).
Cellular Location	Cytoplasm. Nucleus. Note=Localizes to sites of DNA damage (PubMed:25593309). In brains of Alzheimer disease patients, present in a subset of amyloid-containing plaques (PubMed:10727212)
Tissue Location	Ubiquitously expressed, with highest levels in testis. Present in kidney, liver and brain. In the brain, highest levels are found in motor cortex (at protein level)

References

1. PLoS Genet. 2008 Oct;4(10):e1000241. 2. Mol Cell Proteomics. 2008 Mar;7(3):499-508.

Images

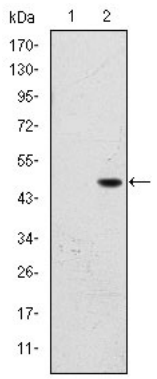


Figure 1: Western blot analysis using BPTF mAb against HEK293 (1) and BPTF (AA: 503-670)-hIgGFc transfected HEK293 (2) cell lysate.

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