

BPTF Rabbit pAb

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Catalog # AP54575

Product Information

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|---|---|
| Application | IHC-P, IHC-F, IF |
| Primary Accession | Q12830 |
| Reactivity | Human, Mouse, Rat |
| Predicted | Chicken, Dog, Rabbit, Sheep, Guinea Pig |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 338262 |
| Physical State | Liquid |
| Immunogen | KLH conjugated synthetic peptide derived from human BPTF/FALZ |
| Epitope Specificity | 2801-3046/3046 |
| Isotype | IgG |
| Purity | affinity purified by Protein A |
| Buffer | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| SUBCELLULAR LOCATION | Cytoplasm. Nucleus. Note=In brains of Alzheimer disease patients, present in a subset of amyloid-containing plaques. |
| SIMILARITY | Belongs to the PBTF family. Contains 1 bromo domain. Contains 1 DDT domain. Contains 2 PHD-type zinc fingers. |
| SUBUNIT | Interacts with MAZ. Interacts with KEAP1. Part of the nucleosome-remodeling factor (NURF) complex which consists of SMARCA1; BPTF; RBBP4 and RBBP7. Interacts with histone H3K4me3 and to a lesser extent with histone H3-K4Me2. |
| Post-translational modifications | Phosphorylation enhances DNA-binding. Phosphorylated upon DNA damage, probably by ATM or ATR. Highly susceptible to proteolysis. |
| Important Note | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| Background Descriptions | This gene was identified by the reactivity of its encoded protein to a monoclonal antibody prepared against brain homogenates from patients with Alzheimer's disease. Analysis of the original protein (fetal Alz-50 reactive clone 1, or FAC1), identified as an 810 aa protein containing a DNA-binding domain and a zinc finger motif, suggested it might play a role in the regulation of transcription. High levels of FAC1 were detected in fetal brain and in patients with neurodegenerative diseases. The protein encoded by this gene is actually much larger than originally thought, and it also contains a C-terminal bromodomain characteristic of proteins that regulate transcription during proliferation. The encoded protein is highly similar to the largest subunit of the Drosophila NURF (nucleosome remodeling factor) complex. In Drosophila, the NURF complex, which catalyzes nucleosome sliding on DNA and interacts with sequence-specific transcription factors, is necessary for the chromatin remodeling required for transcription. Two alternative transcripts encoding different isoforms have been described completely. [provided by RefSeq, Jul 2008] |

Additional Information

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| 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 |
| Target/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). |
| Dilution | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 |
| Storage | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

Protein Information

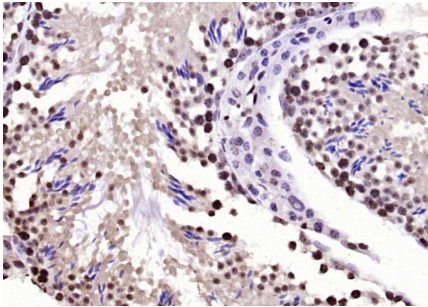
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|--------------------------|--|
| Name | BPTF |
| Synonyms | FAC1, FALZ |
| Function | Regulatory subunit of the ATP-dependent NURF-1 and NURF-5 ISWI chromatin remodeling complexes, which form ordered nucleosome arrays on chromatin and facilitate access 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) |

Background

This gene was identified by the reactivity of its encoded protein to a monoclonal antibody prepared against brain homogenates from patients with Alzheimer's disease. Analysis of the original protein (fetal Alz-50 reactive clone 1, or FAC1), identified as an 810 aa protein containing a DNA-binding domain and a zinc finger motif, suggested it might play a role in the regulation of transcription. High levels of FAC1 were detected in fetal brain and in patients with neurodegenerative diseases. The protein encoded by this gene is actually much larger than originally thought, and it also contains a C-terminal bromodomain characteristic of proteins that regulate transcription during proliferation. The encoded protein is highly similar to the largest

subunit of the Drosophila NURF (nucleosome remodeling factor) complex. In Drosophila, the NURF complex, which catalyzes nucleosome sliding on DNA and interacts with sequence-specific transcription factors, is necessary for the chromatin remodeling required for transcription. Two alternative transcripts encoding different isoforms have been described completely. [provided by RefSeq, Jul 2008]

Images



Paraformaldehyde-fixed, paraffin embedded (mouse testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (BPTF) Polyclonal Antibody, Unconjugated (AP54575) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.