

**DPF3 Antibody**  
**Catalog # ASC11722****Specification**

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**DPF3 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q92784</a>
Other Accession	<a href="#">NP_036206</a> , <a href="#">148762958</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 39 kDa

Application Notes	<b>Observed: 50 kDa KDa</b> DPF3 antibody can be used for detection of DPF3 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry at 5 µg/mL. For Immunofluorescence start at 20 µg/mL.
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**DPF3 Antibody - Additional Information**

Gene ID **8110**

**Target/Specificity**

DPF3; DPF3 antibody is human and mouse reactive. Multiple isoforms of DPF3 are known to exist.

**Reconstitution & Storage**

DPF3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

DPF3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**DPF3 Antibody - Protein Information**

**Name** DPF3

**Synonyms** BAF45C, CERD4

**Function**

Belongs to the neuron-specific chromatin remodeling complex (nBAF complex). During neural development a switch from a stem/progenitor to a post-mitotic chromatin remodeling mechanism occurs as neurons exit the cell cycle and become committed to their adult state. The transition from proliferating neural stem/progenitor cells to post-mitotic neurons requires a switch in subunit composition of the npBAF and nBAF complexes. As neural progenitors exit mitosis and differentiate into neurons, npBAF complexes which contain ACTL6A/BAF53A and PHF10/BAF45A, are exchanged for homologous alternative ACTL6B/BAF53B and DPF1/BAF45B or DPF3/BAF45C subunits in neuron-specific complexes (nBAF). The npBAF complex is essential for the self-renewal/proliferative

capacity of the multipotent neural stem cells. The nBAF complex along with CREST plays a role regulating the activity of genes essential for dendrite growth (By similarity). Muscle-specific component of the BAF complex, a multiprotein complex involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Specifically binds acetylated lysines on histone 3 and 4 (H3K14ac, H3K9ac, H4K5ac, H4K8ac, H4K12ac, H4K16ac). In the complex, it acts as a tissue-specific anchor between histone acetylations and methylations and chromatin remodeling. It thereby probably plays an essential role in heart and skeletal muscle development.

#### **Cellular Location**

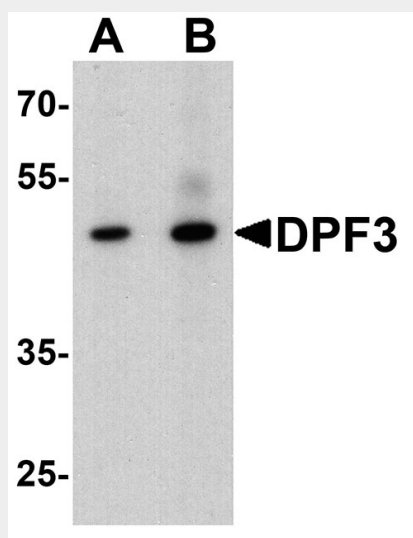
Nucleus.

#### **DPF3 Antibody - Protocols**

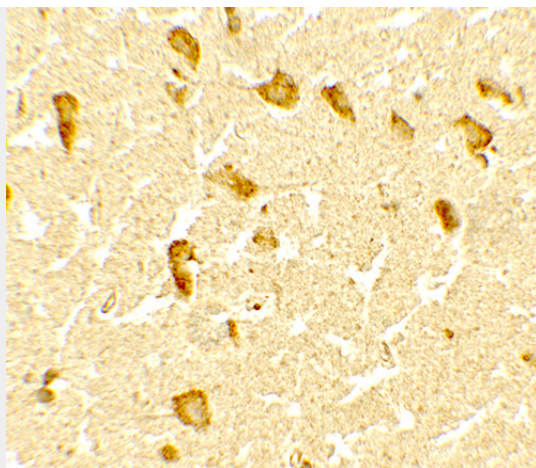
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

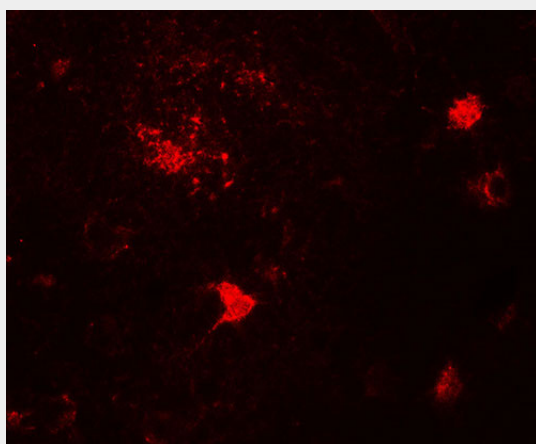
#### **DPF3 Antibody - Images**



Western blot analysis of DPF3 in mouse brain tissue lysate with DPF3 antibody at (A) 1 and (B) 2 µg/ml.



Immunohistochemistry of DPF3 in human brain tissue with DPF3 antibody at 5 µg/mL.



Immunofluorescence of DPF3 in human brain tissue with DPF3 antibody at 20 µg/mL.

### **DPF3 Antibody - Background**

The DPF3 protein, also known as Cerd4, is a member of the d4 gene family of transcription modulators that also includes DPF1/Neud4 and DPF2/Requiem (1). DPF3 has been shown to be an epigenetic key factor for heart and muscle development and can bind to methylated and acetylated lysine residues of histone 3 and 4, suggesting that DPF3 may play a role in recruiting chromatin remodeling complexes to acetylated histones (2). Two isoforms of DPF3, DPF3a and DPF3b, are required as transcriptional co-activators in SWI/SNF complex-dependent activation of the NF-kappaB RelA/p50 heterodimer (3).

### **DPF3 Antibody - References**

Ninkina NN, Mertsalov IB, Kulikova DA, et al. Cerd4, third member of the d4 gene family: expression and organization of genomic locus. *Mamm. Genome* 2001; 12:862-6.  
Lange M, Kaynak B, Forster UB. Regulation of muscle development by DBF3, a novel histone acetylation and methylation reader of the BAF chromatin remodeling complex. *Genes Dev.* 2008; 22:2370-84.  
Ishizaka A, Mizutani T, Kobayashi K, et al. Double plant homeodomain (PHD) finger proteins DPF3a and -3b are required as transcriptional co-activators in SWI/SNF complex-dependent activation of NF-kappaB RelA/p50 heterodimer. *J. Biol. Chem.* 2012; 287:11924-33.