Anti-Human DPF1, monoclonal (clone R1172.1.1A9)

Recommended name: Zinc finger protein neuro-d4; D4, zinc and double PHD fingers family 1
Alternative name(s): BRG1-associated factor 45B; Short names: BAF45B

Cat. No.	**m15-076**	**Quantity:**	**100 µg**
Lot. No.	**20150720.LI**	**Storage:**	**-20˚C**

FOR RESEARCH USE ONLY

NOT FOR USE IN HUMANS

Uniprot / NCBI Summary

UniProt
Primary Accession # Q92782
Secondary Accession # Q08AJ0; B3KSY8

NCBI
GI # 313104100
GeneID 8193
Accession # Q92782.2
GenBank Nucleotide # n/a

Molecular Weight 42,502 Da (380 aa)

DPF1: May have an important role in developing neurons by participating in regulation of cell survival, possibly as a neurospecific transcription factor. 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

Continued on page 2.

Physical Characteristics

Quantity: 100 µg

Concentration: 1.0 mg/ml

Host / Isotype: mouse IgG2a

Clonality: monoclonal; ID R1172.1.1A9

Immunogen: recombinant protein corresponding to aa residues 230-380 of human DPF1

Purification: affinity-chromatography using Protein G

Formulation: 30% glycerol, 1x PBS, 0.02% sodium azide

Specificity: monospecific for human DPF1; see microarray analysis below

Reactivity: human

Stability/Storage: 12 months long term: -20˚C; short term: 4˚C; avoid freeze-thaw cycles; aliquot as required

Handling Notes: small volumes of antibody may occasionally become entrapped in the seal of the product vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container cap.

Tested Research Applications

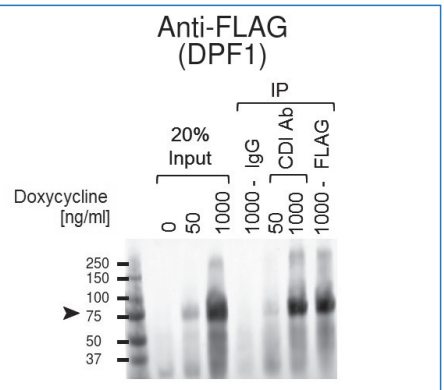
Immunoprecipitation: recommended; see below.

Western Blot: tested on cells transfected with a construct encoding DPF1; utility on native cells under evaluation

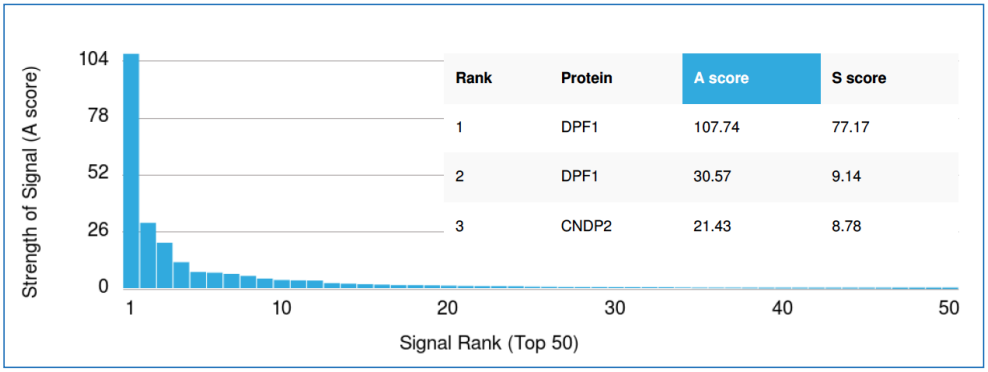
ChIP-Seq: recommended; see page 2

Octet:
Recommended.

Quality Assurance



Tet-ON HeLa cells were transfected with construct encoding DPF1 (BC125153) with an N-terminal fusion of FLAG, YFP (Venus) and V5 tags under a tet-inducible promoter. These cells were stimulated with 0, 50 or 1000 ng/ml doxycycline. Immunoprecipitation (IP) was carried out using 5ug of either IgG, CDI mAb Anti-DPF1 (cloneID# R1172.1.1A9) or 1 ug of FLAG-M2. Immunoblotting was performed using rabbit Anti-FLAG (1:1000, Cell Signaling #2368).



Rank	Protein	A score	S score
1	DPF1	107.74	77.17
2	DPF1	30.57	9.14
3	CNDP2	21.43	8.78

Specificity Analysis with HuProt™ Human Proteome Microarray: Anti Human DPF1 (clone R1172.1.1A9) was analyzed using the CDI HuProt™ Human Proteome Microarray.

For more information on A/S scores and how they relate to specificity, see page 2.

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Lot-specific Datasheet version tracker: v1.0.0

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Continued from page 1.

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. Belongs to the requiem/DPF family. 3 isoforms of the human protein are produced by alternative splicing.

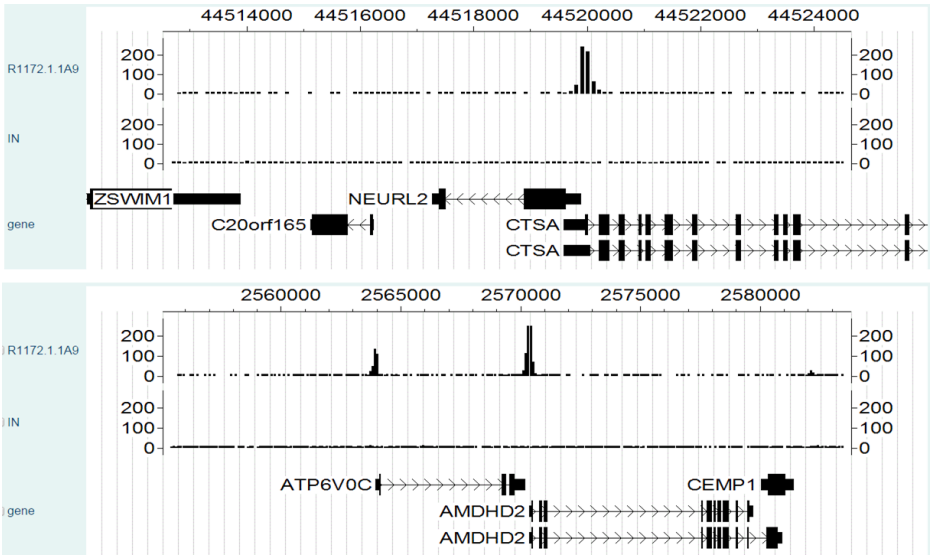
Cellular Component: cytoplasm; nucleus

General Reference:

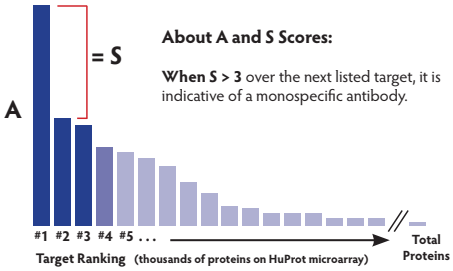
Ishizaka A, Mizutani T, Kobayashi K, Tando T, Sakurai K, Fujiwara T, Iba H (2012) Double plant homeodomain (PHD) finger proteins DPF3a and -3b are required as transcriptional co-activators in SWI/SNF complex-dependent activation of NF-κB RelA/p50 heterodimer. *J Biol Chem* **287**:11924-33. [PubMed]

Tested Research Applications

ChIP-Seq: Recommended



The ChIP was performed with chromatin from 10 million HCT116 cells and 3 µg of Anti-DPF1 (cloneID #R1172.1.1A9) antibody. The ChIP DNA was sequenced on an Illumina HiSeq platform and read counts were calculated at consecutive 100 bp bins across the human genome hg19. Normalized read-count levels for ChIP-seq of DPF1 (R1172.1.1A9) and control (IN) around the AMDHD2 and NEURL2 loci are displayed in the CisGenome browser.



About A and S Scores:

When S > 3 over the next listed target, it is indicative of a monospecific antibody.

Statistical Analysis: Thousands of GenePix data points (from the microarray) are analyzed in terms of signal strength and ranked accordingly.

SUMMARY: The A-score indicates the number of standard deviations above background seen for the mean signal bound by the target antigen The S-score represents the difference between the A-score of the target antigen and the next best hit on the array. S-scores **greater than 3 standard deviations over the next listed target** are deemed statistically significant and indicate **highly specific antibodies.** More info at cdi-lab.com/HighSpec.html

The development of this antibody was supported by the National Institutes of Health Protein Capture Reagent Program under award U54HG06434 to CDI Laboratories and Johns Hopkins University.

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