SANTA CRUZ BIOTECHNOLOGY, INC.

DIP2A (4E6): sc-293390

BACKGROUND

DIP2A (disco-interacting protein 2 homolog A), also known as DIP2, is a 1,571 amino acid nuclear protein. It is one of three human homologs (DIP2A, DIP2B and DIP2C) of the *Drosophila* dip2 (disconnected-interacting protein 2) protein. In *Drosophila*, dip2 interacts with disco, a protein required for neuronal connections in the visual systems of larvae and adults. The closest vertebrate homologs to disco are the basonuclin genes. In mice, DIP2 homologs show restricted expression to the brain. This suggests that, similar to the function of *Drosphila* dip2, vertebrate DIP2 homologs may play a role in the development of the nervous system. Expressed ubiquitously with highest expression in the brain, DIP2A is thought to function in signaling throughout the central nervous system by providing positional clues for axon patterning and pathfinding. Four isoforms of DIP2A exist due to alternative splicing events.

REFERENCES

1. Mukhopadhyay, M., et al. 2002. Cloning, genomic organization and expression pattern of a novel *Drosophila* gene, the disco-interacting protein 2 (dip2), and its murine homolog. Gene 293: 59-65.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607711. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. DeSousa, D., et al. 2003. A novel double-stranded RNA-binding protein, disco-interacting protein 1 (DIP1), contributes to cell fate decisions during *Drosophila* development. J. Biol. Chem. 278: 38040-38050.
4. De Felice, B., et al. 2003. Characterization of DIP1, a novel nuclear protein in *Drosophila melanogaster.* Biochem. Biophys. Res. Commun. 307: 224-228.
5. Bondos, S.E., et al. 2004. Hox transcription factor ultrabithorax Ib physically and genetically interacts with disconnected interacting protein 1, a double-stranded RNA-binding protein. J. Biol. Chem. 279: 26433-26444.

CHROMOSOMAL LOCATION

Genetic locus: DIP2A (human) mapping to 21q22.3.

SOURCE

DIP2A (4E6) is a mouse monoclonal antibody raised against amino acids 107-301 of DIP2A of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

DIP2A (4E6) is recommended for detection of DIP2A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DIP2A siRNA (h): sc-62212, DIP2A shRNA Plasmid (h): sc-62212-SH and DIP2A shRNA (h) Lentiviral Particles: sc-62212-V.

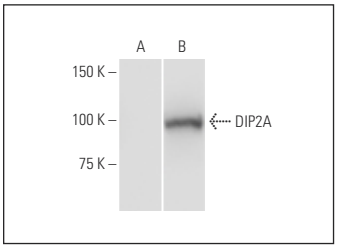
Molecular Weight of DIP2A: 170 kDa.

Positive Controls: DIP2A transfected 293T whole cell lysate.

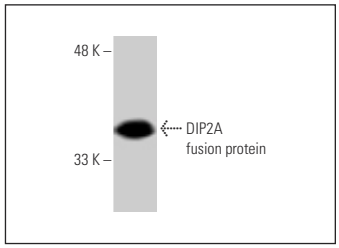
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



DIP2A (4E6): sc-293390. Western blot analysis of DIP2A expression in non-transfected (**A**) and DIP2A transfected (**B**) 293T whole cell lysates.



DIP2A (4E6): sc-293390. Western blot analysis of human recombinant DIP2A fusion protein.

RESEARCH USE

For research use only, not for use in diagnostic procedures.