

DLK2 (B-10): sc-376896

BACKGROUND

DLK2 (δ homolog 2), also known as EGFL9 (epidermal growth factor-like protein 9), is a 383 amino acid single-pass transmembrane protein with six tandem EGF-like repeats in the putative extracellular domain, which is characteristic of the EGF-like protein family. DLK2 shares nearly identical structural features with DLK, suggesting that it may function in a similar way. Like DLK, DLK2 affects adipogenesis of 3T3-L1 preadipocytes and mesenchymal C3H10T1/2 cells, yet it does so in an opposite way to that of DLK. Also, expression of DLK and DLK2 are inversely correlated and changes in expression of one gene will affect the expression levels of the other. Therefore, it is likely that adipogenesis is modulated by the coordinated expression of DLK and DLK2. There are two isoforms of DLK2 that are produced as a result of alternative splicing events.

REFERENCES

1. Garces, C., et al. 1999. Adipocyte differentiation is modulated by secreted δ -like (dlk) variants and requires the expression of membrane-associated dlk. *Differentiation* 64: 103-114.
2. Cowherd, R.M., et al. 1999. Molecular regulation of adipocyte differentiation. *Semin. Cell Dev. Biol.* 10: 3-10.
3. Ntambi, J.M., et al. 2000. Adipocyte differentiation and gene expression. *J. Nutr.* 130: 3122S-3126S.
4. Nueda, M.L., et al. 2007. The novel gene EGFL9/DLK2, highly homologous to Dlk1, functions as a modulator of adipogenesis. *J. Mol. Biol.* 367: 1270-1280.
5. Nueda, M.L., et al. 2007. The EGF-like protein dlk1 inhibits notch signaling and potentiates adipogenesis of mesenchymal cells. *J. Mol. Biol.* 367: 1281-1293.

CHROMOSOMAL LOCATION

Genetic locus: DLK2 (human) mapping to 6p21.1.

SOURCE

DLK2 (B-10) is a mouse monoclonal antibody raised against amino acids 181-305 mapping within an N-terminal extracellular domain of DLK2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DLK2 (B-10) is available conjugated to agarose (sc-376896 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376896 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376896 PE), fluorescein (sc-376896 FITC), Alexa Fluor[®] 488 (sc-376896 AF488), Alexa Fluor[®] 546 (sc-376896 AF546), Alexa Fluor[®] 594 (sc-376896 AF594) or Alexa Fluor[®] 647 (sc-376896 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376896 AF680) or Alexa Fluor[®] 790 (sc-376896 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DLK2 (B-10) is recommended for detection of DLK2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DLK2 siRNA (h): sc-95621, DLK2 shRNA Plasmid (h): sc-95621-SH and DLK2 shRNA (h) Lentiviral Particles: sc-95621-V.

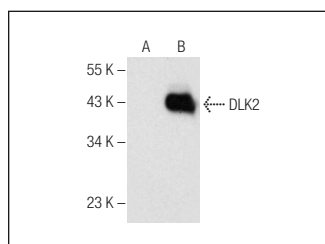
Molecular Weight of DLK2: 41 kDa.

Positive Controls: DLK2 (h): 293T Lysate: sc-111975.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



DLK2 (B-10): sc-376896. Western blot analysis of DLK2 expression in non-transfected: sc-117752 (A) and human DLK2 transfected: sc-111975 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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