

# DLK (H-118): sc-25437

## BACKGROUND

The human DLK gene maps to human chromosome 14q32.2 and encodes a 383 amino acid protein. DLK, also designated preadipocyte factor 1 (pref-1), ZOG, pG2 or FA1, is a transmembrane protein with six tandem EGF-like repeats in the putative extracellular domain, which is characteristic of the EGF-like protein family. DLK shares homology with invertebrate homeotic proteins, including Delta and Notch, which are proteins that mediate normal neural differentiation in *Drosophila*. In mammalian preadipocytes, multiple discrete forms of DLK protein are present due to N-linked glycosylation. DLK is expressed in tumors with neuroendocrine features, such as neuroblastoma and pheochromocytoma cell lines. Normal tissue expression is restricted to the adrenal gland and placenta. Protein-protein interaction between DLK proteins belonging to the same or to different cells, or the interaction between soluble and membrane DLK variants, may be important in regulation of DLK function.

## CHROMOSOMAL LOCATION

Genetic locus: DLK1 (human) mapping to 14q32.2; Dlk1 (mouse) mapping to 12 F1.

## SOURCE

DLK (H-118) is a rabbit polyclonal antibody raised against amino acids 266-383 of DLK of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

DLK (H-118) is recommended for detection of DLK of mouse, rat and 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)], 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).

DLK (H-118) is also recommended for detection of DLK in additional species, including equine, canine and porcine.

Suitable for use as control antibody for DLK siRNA (h): sc-39669, DLK siRNA (m): sc-39670, DLK shRNA Plasmid (h): sc-39669-SH, DLK shRNA Plasmid (m): sc-39670-SH, DLK shRNA (h) Lentiviral Particles: sc-39669-V and DLK shRNA (m) Lentiviral Particles: sc-39670-V.

Molecular Weight of DLK isoforms: 45-60 kDa.

Positive Controls: JEG-3 whole cell lysate: sc-364255, NIH/3T3 whole cell lysate: sc-2210 or JAR cell lysate: sc-2276.

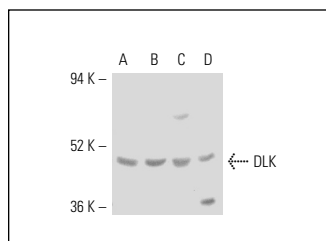
## STORAGE

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.

## DATA



DLK (H-118): sc-25437. Western blot analysis of DLK expression in JAR (A), NIH/3T3 (B) and JEG-3 (C) whole cell lysates and rat placenta tissue extract (D).

## SELECT PRODUCT CITATIONS

- Huang, J., et al. 2006. Up-regulation of DLK1 as an imprinted gene could contribute to human hepatocellular carcinoma. *Carcinogenesis* 28: 1094-1103.
- Yamanouchi, K., et al. 2006. Increased adipogenicity of cells from regenerating skeletal muscle. *Exp. Cell Res.* 312: 2701-2711.
- da Rocha, S.T., et al. 2009. Gene dosage effects of the imprinted  $\delta$ -like homologue 1 (DLK1/pref1) in development: implications for the evolution of imprinting. *PLoS Genet.* 5: e1000392.
- Chiu, C.C., et al. 2009. Global gene expression profiling reveals a key role of CD44 in hepatic oval-cell reaction after 2-AAF/CCl<sub>4</sub> injury in rodents. *Histochem. Cell Biol.* 132: 479-489.
- Yu, F., et al. 2010.  $\delta$ -like 1 contributes to cell growth by increasing the interferon-inducible protein 16 expression in hepatocellular carcinoma. *Liver Int.* 30: 703-714.
- Teichroeb, J.H., et al. 2011. Suppression of the imprinted gene NNAT and X-chromosome gene activation in isogenic human iPS cells. *PLoS ONE* 6: e23436.
- Müller, D., et al. 2014. Dlk1 promotes a fast motor neuron biophysical signature required for peak force execution. *Science* 343: 1264-1266.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **DLK (B-7): sc-376755** or **DLK (Lc-12): sc-80024**, our highly recommended monoclonal alternatives to DLK (H-118). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **DLK (B-7): sc-376755**.