

Cdc2L5 (ZZ08): sc-81837

BACKGROUND

The eukaryotic cell division cycle consists of a number of gene-controlled sequences that involve cyclin-dependent kinases (Cdks) and cell division control (Cdc) proteins. Cdc2L5 (cell division cycle 2-like 5), also known as CHED or CDC2L, is a member of the cyclin-dependent serine/threonine protein kinase family that plays a role in cell differentiation and apoptosis. Expressed in liver, brain and muscle, Cdc2L5 is thought to control key events in the mitotic cycle and may be involved in the development of blood cells. Due to its role in mitosis, overexpression of Cdc2L5 is implicated in the development of neuroblastoma and glioblastoma tumors, suggesting a possible role for Cdc2L5 in carcinogenesis. Cdc2L5 contains one protein kinase domain and is expressed as two different isoforms produced by alternative splicing events.

REFERENCES

1. Lapidot-Lifson, Y., et al. 1992. Cloning and antisense oligodeoxynucleotide inhibition of a human homolog of Cdc2 required in hematopoiesis. *Proc. Natl. Acad. Sci. USA* 89: 579-583.
2. Marques, F., et al. 2000. A new subfamily of high molecular mass Cdc2-related kinases with PITAI/VRE motifs. *Biochem. Biophys. Res. Commun.* 279: 832-837.
3. Kristich, C.J. and Ordal, G.W. 2002. *Bacillus subtilis* CheD is a chemoreceptor modification enzyme required for chemotaxis. *J. Biol. Chem.* 277: 25356-25362.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603309. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Even, Y., et al. 2006. Cdc2L5, a Cdk-like kinase with RS domain, interacts with the ASF/SF2-associated protein p32 and affects splicing *in vivo*. *J. Cell. Biochem.* 99: 890-904.
6. Chen, H.H., et al. 2007. Cdk13/Cdc2L5 interacts with L-type cyclins and regulates alternative splicing. *Biochem. Biophys. Res. Commun.* 354: 735-740.

CHROMOSOMAL LOCATION

Genetic locus: CDK13 (human) mapping to 7p14.1; Cdk13 (mouse) mapping to 13 A2.

SOURCE

Cdc2L5 (ZZ08) is a mouse monoclonal antibody raised against a recombinant protein mapping within amino acids 1-324 representing full length Cdc2L5 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ 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.

APPLICATIONS

Cdc2L5 (ZZ08) is recommended for detection of Cdc2L5 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).

Suitable for use as control antibody for Cdc2L5 siRNA (h): sc-72835, Cdc2L5 siRNA (m): sc-72836, Cdc2L5 shRNA Plasmid (h): sc-72835-SH, Cdc2L5 shRNA Plasmid (m): sc-72836-SH, Cdc2L5 shRNA (h) Lentiviral Particles: sc-72835-V and Cdc2L5 shRNA (m) Lentiviral Particles: sc-72836-V.

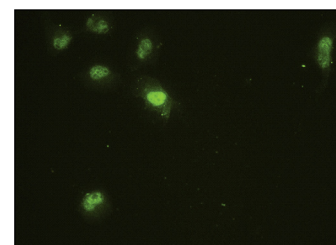
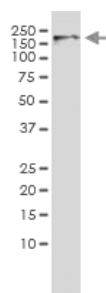
Molecular Weight of Cdc2L5: 165 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



Cdc2L5 (ZZ08): sc-81837. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Chen, S., et al. 2023. Cullin-5 deficiency orchestrates the tumor microenvironment to promote mammary tumor development through CREB1-CCL2 signaling. *Sci. Adv.* 9: eabq1395.

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.