

DUS1L (H-12): sc-393586

BACKGROUND

DUS1L (dihydrouridine synthase 1-like), also known as tRNA-dihydrouridine synthase 1-like, DUS1 or PP3111, is a 473 amino acid protein belonging to the DUS family and DUS1 subfamily that catalyzes the synthesis of dihydrouridine, a modified base located in the D-loop of many tRNAs. DUS1L binds FAD as a cofactor and is encoded by a gene located on human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

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- Evans, S.C., et al. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
- Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. *Oncogene* 14: 865-871.
- Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. *Br. J. Cancer* 77: 192-200.
- Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
- Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.

CHROMOSOMAL LOCATION

Genetic locus: DUS1L (human) mapping to 17q25.3; Dus1l (mouse) mapping to 11 E2.

SOURCE

DUS1L (H-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 366-389 near the C-terminus of DUS1L of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393586 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

DUS1L (H-12) is recommended for detection of DUS1L of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DUS1L (H-12) is also recommended for detection of DUS1L in additional species, including equine and canine.

Suitable for use as control antibody for DUS1L siRNA (h): sc-93663, DUS1L siRNA (m): sc-143191, DUS1L shRNA Plasmid (h): sc-93663-SH, DUS1L shRNA Plasmid (m): sc-143191-SH, DUS1L shRNA (h) Lentiviral Particles: sc-93663-V and DUS1L shRNA (m) Lentiviral Particles: sc-143191-V.

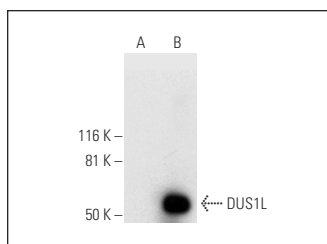
Molecular Weight of DUS1L: 53 kDa.

Positive Controls: DUS1L (h2): 293T Lysate: sc-116777.

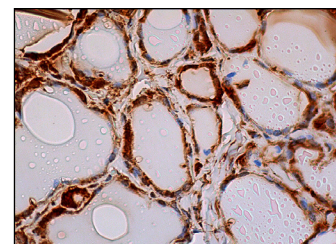
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DUS1L (H-12): sc-393586. Western blot analysis of DUS1L expression in non-transfected: sc-117752 (A) and human DUS1L transfected: sc-116777 (B) 293T whole cell lysates.



DUS1L (H-12): sc-393586. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

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.