

Peg10 (G-19): sc-104589

BACKGROUND

Peg10 (paternally expressed gene 10), also known as EDR, KIAA1051, MAR2, MART2, MEF3L1 or RGAG3, is a 708 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one CCHC-type zinc finger. Expressed in placenta, brain, kidney, liver, thymus, lung, ovary and spleen, Peg10 plays a role in cell growth promotion and apoptosis prevention and is, therefore, thought to be a potent factor in tumor formation and metastasis. Peg10 exists as two distinct isoforms, designated RF1 and RF1/RF2, which have distinctive active sites, but are both associated with cell growth and differentiation control. The gene encoding Peg10 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Ono, R., et al. 2001. A retrotransposon-derived gene, Peg10, is a novel imprinted gene located on human chromosome 7q21. *Genomics* 73: 232-237.
2. Shigemoto, K., et al. 2001. Identification and characterisation of a developmentally regulated mammalian gene that utilises -1 programmed ribosomal frameshifting. *Nucleic Acids Res.* 29: 4079-4088.
3. Li, C.M., et al. 2006. Peg10 is a c-Myc target gene in cancer cells. *Cancer Res.* 66: 665-672.
4. Ono, R., et al. 2006. Deletion of Peg10, an imprinted gene acquired from a retrotransposon, causes early embryonic lethality. *Nat. Genet.* 38: 101-106.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609810. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Kainz, B., et al. 2007. Overexpression of the paternally expressed gene 10 (Peg10) from the imprinted locus on chromosome 7q21 in high-risk B cell chronic lymphocytic leukemia. *Int. J. Cancer* 121: 1984-1993.

CHROMOSOMAL LOCATION

Genetic locus: Peg10 (mouse) mapping to 6 A1.

SOURCE

Peg10 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Peg10 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-104589 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Peg10 (G-19) is recommended for detection of Peg10-RF1 and Peg10-RF1/2 of mouse and rat 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); non cross-reactive with family members Peg1 or Peg3.

Peg10 (G-19) is also recommended for detection of Peg10-RF1 and Peg10-RF1/2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Peg10 siRNA (m): sc-152158, Peg10 shRNA Plasmid (m): sc-152158-SH and Peg10 shRNA (m) Lentiviral Particles: sc-152158-V.

Molecular Weight of Peg10 RF1 human variant: 37 kDa.

Molecular Weight of Peg10 RF1/RF2 mouse variant: 80 kDa.

Molecular Weight of Peg10 RF1: 42 kDa.

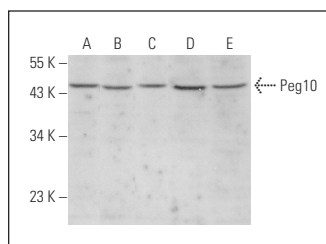
Molecular Weight of Peg10 RF1/RF2: 110 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, KNRK whole cell lysate: sc-2214 or PC-12 cell lysate: sc-2250.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Peg10 (G-19): sc-104589. Western blot analysis of Peg10 expression in AT3B-1 (A), C6 (B), KNRK (C), PC-12 (D) and AMJ2-C8 (E) whole cell lysates.

RESEARCH USE

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