10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PEG10 Rabbit pAb

Catalog # AP96463

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q86TG7
Other Accession	Q86TG7
Reactivity	Human, Mouse
Predicted	Rat, Pig, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	80173
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PEG10
Epitope Specificity	301-400/708
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 CCHC-type zinc finger.
SUBUNIT	Interacts with ALK1, SIAH1 and SIAH2.
Post-translational modifications	Isoform RF1/RF2 undergoes proteolytic cleavage.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This is a paternally expressed imprinted gene that encodes transcripts containing two overlapping open reading frames (ORFs), RF1 and RF1/RF2, as well as retroviral-like slippage and pseudoknot elements, which can induce a -1 nucleotide frame-shift. ORF1 encodes a shorter isoform with a CCHC-type zinc finger motif containing a sequence characteristic of gag proteins of most retroviruses and some retrotransposons. The longer isoform is the result of -1 translational frame-shifting leading to translation of a gag/pol-like protein combining RF1 and RF2. It contains the active-site consensus sequence of the protease domain of pol proteins. Additional isoforms resulting from alternatively spliced transcript variants, as well as from use of upstream non-AUG (CUG) start codon, have been reported for this gene. Increased expression of this gene is associated with hepatocellular carcinomas. [provided by RefSeq, May 2010].

Additional Information

Gene ID	23089
Other Names	EDR; HB-1; MEF3L; Mar2; Mart2; RGAG3; RTL2; SIRH1; MmPEG10; MyEF-3; PEG10_HUMAN; PEG10; Embryonal carcinoma differentiation-regulated protein; Mammalian retrotransposon-derived protein 2; Myelin expression factor 3-like protein 1 (MEF3-like protein 1); Paternally expressed gene 10

	protein; Retrotransposon gag domain-containing protein 3; Retrotransposon-derived gag-like polyprotein; Ty3/Gypsy-like protein; KIAA1051e; MEF3L1; PEG10_MOUSE; Embryonal carcinoma differentiation regulated protein; Myelin expression factor 3 (MyEF-3); paternally expressed 10; Sushi-Ichi retrotransposon homolog 1; mammalian retrotransposon-derived 2; retrotransposon Gag like 2
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	PEG10 {ECO:0000303|PubMed:11318613, ECO:0000312|HGNC:HGNC:14005}
Function	Retrotransposon-derived protein that binds its own mRNA and self-assembles into virion-like capsids (PubMed:34413232). Forms virion-like extracellular vesicles that encapsulate their own mRNA and are released from cells, enabling intercellular transfer of PEG10 mRNA (PubMed:34413232). Binds its own mRNA in the 5'-UTR region, in the region near the boundary between the nucleocapsid (NC) and protease (PRO) coding sequences and in the beginning of the 3'-UTR region (PubMed:34413232). Involved in placenta formation: required for trophoblast stem cells differentiation (By similarity). Involved at the immediate early stage of adipocyte differentiation (By similarity). Overexpressed in many cancers and enhances tumor progression: promotes cell proliferation by driving cell cycle progression from G0/G1 (PubMed:12810624, PubMed:16423995, PubMed:26235627, PubMed:28193232). Enhances cancer progression by inhibiting the TGF-beta signaling, possibly via interaction with the TGF-beta receptor ACVRL1 (PubMed:15611116, PubMed:26235627, PubMed:30094509). May bind to the 5'-GCCTGTCTTT-3' DNA sequence of the MB1 domain in the myelin basic protein (MBP) promoter; additional evidence is however required to confirm this result (By similarity).
Cellular Location	Extracellular vesicle membrane. Cytoplasm. Nucleus Note=Forms virion-like extracellular vesicles that are released from cells (PubMed:34413232). Detected predominantly in the cytoplasm of breast and prostate carcinomas, in hepatocellular carcinoma (HCC) and B-cell chronic lymphocytic leukemia (B-CLL) cells and in the Hep-G2 cell line (PubMed:12810624).
Tissue Location	Expressed in the cytotrophoblast layer but not in the overlying syncytiotrophoblast of the placenta. Expressed in prostate and breast carcinomas but not in normal breast and prostate epithelial cells. Expressed in the Hep-G2 cell line (at protein level) Expressed in brain, liver, spleen, kidney, thymus, lung, ovary, testis, reactive lymph node, skeletal muscle, adipose tissue and placenta Expressed in pancreatic and hepatocellular carcinomas (HCC)

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