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PEG10 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52782

Product Information

Primary Accession	Q86TG7
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	80173

Additional Information

Gene ID	23089
Other Names	AA407948;Edr;Embryonal carcinoma differentiation regulated;Embryonal carcinoma differentiation-regulated protein;HB 1;HB1;KIAA1051;Mammalian retrotransposon-derived protein 2;Mar2;Mart2;MEF3 like 1;MEF3-like protein 1;MEF3L;MEF3L1;MyEF 3;Myelin expression factor 3-like protein 1;Paternally expressed 10;Paternally expressed gene 10 ORF1;Paternally expressed gene 10 protein;Peg10;PEG10 protein;PEG10_HUMAN;Putative uncharacterized protein PEG10;Retrotransposon gag domain containing 3;Retrotransposon gag domain-containing protein 3;Retrotransposon-derived gag-like polyprotein; Retrotransposon-derived protein PEG10;RGAG3;Ty3/Gypsy-like protein.
Format	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.09% (W/V) sodium azide, 50%,glycerol
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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 evidences are 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)

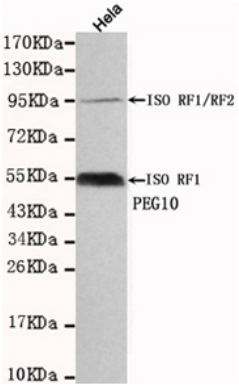
Background

Prevents apoptosis in hepatocellular carcinoma (HCC) cells through interaction with SIAH1, a mediator of apoptosis. May also have a role in cell growth promotion and hepatoma formation. Inhibits the TGF-beta signaling by interacting with the TGF-beta receptor ALK1. When overexpressed, induces the formation of cellular extension, such as filipodia in association with ALK1. Involved at the immediate early stage of adipocyte differentiation (By similarity). May bind to the 5'-GCCTGTCTTT-3' DNA sequence of the MB1 domain in the myelin basic protein (MBP) promoter (By similarity).

References

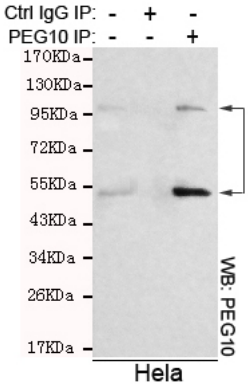
Ono R.,et al.Genomics 73:232-237(2001).
Nagase T.,et al.DNA Res. 6:63-70(1999).
Ohara O.,et al.Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
Satoh S.,et al.Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 424:157-164(2003).

Images



Western blot detection of PEG10 in Hela cell lysates using PEG10 mouse mAb (1:1000 diluted).Predicted band size:55KDa.Observed band size:55KDa,95KDa.

Immunoprecipitation analysis of Hela cell lysates using



PEG10 mouse mAb.

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