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

EDR / PEG10 Antibody (clone 1B1C4)

Mouse Monoclonal Antibody
Catalog # ALS13159

Specification

EDR / PEG10 Antibody (clone 1B1C4) - Product Information

Application	**WB, IF, IHC**
Primary Accession	Q86TG7
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**80kDa KDa**

EDR / PEG10 Antibody (clone 1B1C4) - Additional Information

Gene ID 23089

Other Names
Retrotransposon-derived protein 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, PEG10, EDR, KIAA1051, MAR2, MART2, MEF3L1, RGAG3

Target/Specificity
Human PEG10

Reconstitution & Storage
Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

Precautions
EDR / PEG10 Antibody (clone 1B1C4) is for research use only and not for use in diagnostic or therapeutic procedures.

EDR / PEG10 Antibody (clone 1B1C4) - 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)

Volume
50 µl

EDR / PEG10 Antibody (clone 1B1C4) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

EDR / PEG10 Antibody (clone 1B1C4) - Images

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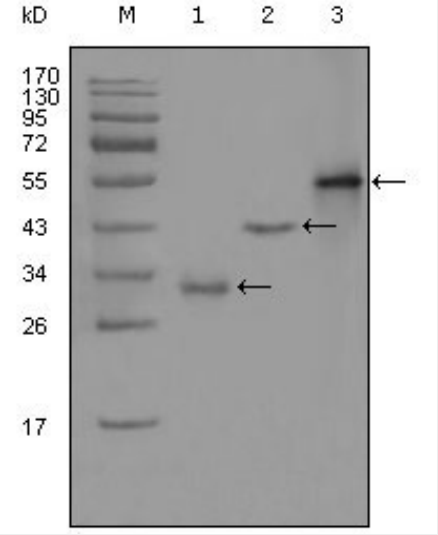
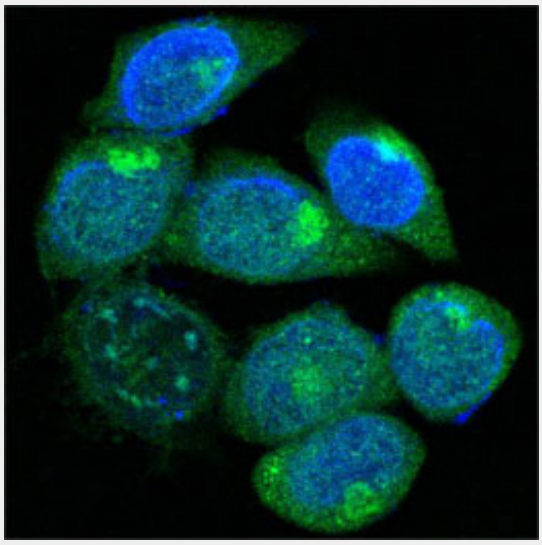
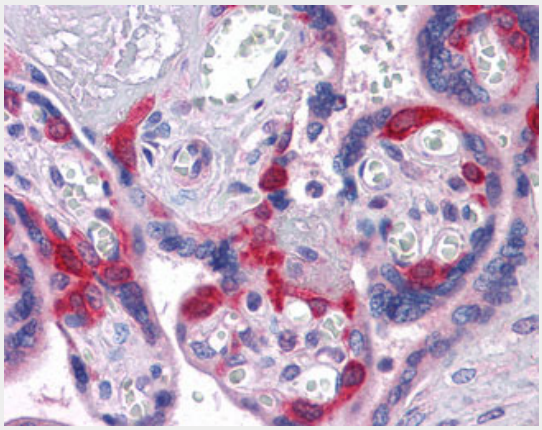


Western blot using PEG10 mouse monoclonal antibody against truncated Trx-PEG10 recombinant...



Confocal immunofluorescence of methanol-fixed HepG2 cells using PEG10 mouse monoclonal antibody...



Anti-PEG10 antibody IHC of human placenta.

EDR / PEG10 Antibody (clone 1B1C4) - 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).

EDR / PEG10 Antibody (clone 1B1C4) - 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).