

Recombinant Human PEG10 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. PEG10-3530H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	PEG10 MS Standard C13 and N15-labeled recombinant protein (NP_001035242) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	This is a paternally expressed imprinted gene that is thought to have been derived from the Ty3/Gypsy family of retrotransposons. It contains two overlapping open reading frames, RF1 and RF2, and expresses two proteins: a shorter, gag-like protein (with a CCHC-type zinc finger domain) from RF1; and a longer, gag/pol-like fusion protein (with an additional aspartic protease motif) from RF1/RF2 by -1 translational frameshifting (-1 FS). While -1 FS has been observed in RNA viruses and transposons in both prokaryotes and eukaryotes, this gene represents the first example of -1 FS in a eukaryotic cellular gene. This gene is highly conserved across mammalian species and retains the heptanucleotide (GGGAAAC) and pseudoknot elements required for -1 FS. It is expressed in adult and embryonic tissues (most notably in placenta) and reported to have a role in cell proliferation, differentiation and apoptosis. Overexpression of this gene has been associated with several malignancies, such as hepatocellular carcinoma and B-cell lymphocytic leukemia. Knockout mice lacking this gene showed early embryonic lethality with placental defects, indicating the importance of this gene in embryonic development. Additional isoforms resulting from alternatively spliced transcript variants, and use of upstream

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non-AUG (CUG) start codon have been reported for this gene.

Molecular Mass	37 kDa
AA Sequence	MTERRRDELSEEEINNLREKVMKQSEENNNLQSQVQKLTEENTTLREQVEPTPEDED DDIELRGAAAAAAPPPIEEECPEDLPEKFDGNPDMLAPFMAQCQIFMEKSTRDFSV DRVRVCFVTSMMTGRAARWASAKLERSHYLMHNYPAFMMEMKHVFEDPQRREVA KRKIRRLRQGMGSVIDYSNAFQMQDLWDNEPALIDQYHEGLSDHIQEELSHLEVA KSLSALIGQCIHIERRLARAAAARKPRSPPRALVLPFIASHHQVDPTEPVGGARMRLT QEEKERRRKLNLCLYCGTGGHYADNCPAKASKSSPAGNSPAPLTRTRPLEQKLISE EDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 µg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name	PEG10 paternally expressed 10 [Homo sapiens (human)]
Official Symbol	PEG10
Synonyms	PEG10; paternally expressed 10; retrotransposon-derived protein PEG10; HB 1; KIAA1051; Mar2; Mart2; MEF3L; RGAG3; MEF3 like 1; MEF3-like protein 1;

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ty3/Gypsy-like protein; paternally expressed gene 10 protein; retrotransposon gag domain containing 3; myelin expression factor 3-like protein 1; mammalian retrotransposon-derived protein 2; retrotransposon-derived gag-like polyprotein; embryonal carcinoma differentiation regulated; retrotransposon gag domain-containing protein 3; embryonal carcinoma differentiation-regulated protein; EDR; HB-1;

Gene ID [23089](#)

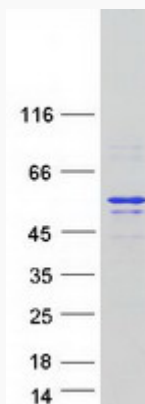
mRNA Refseq [NM_001040152](#)

Protein Refseq [NP_001035242](#)

MIM [609810](#)

UniProt ID [Q86TG7](#)

SDS-PAGE



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