

CART Protein, Human, Recombinant

General Information

Synonyms:	CART;CART prepropeptide
Protein Construction:	A DNA sequence encoding the human CARTPT (NP_004282.1) (Met1-Leu116) was expressed with five amino acids (DDDDK) at the C-terminus. Predicted N terminal: Gln 28
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q16568
Molecular Weight:	10.6 kDa (predicted); 11 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

In RNAseq data from human islet donors, CARTPT expression levels correlated with insulin, exocytosis genes and key beta-cell transcription factors.

Insufficient insulin release and hyperglucagonaemia are culprits in type 2 diabetes. Cocaine- and amphetamine-regulated transcript (CART, encoded by Cartpt) affects islet hormone secretion and beta cell survival in vitro in rats, and Cart (-/-) mice have diminished insulin secretion. Established a potential role for cocaine and amphetamine

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regulated transcript (CARTPT) in dominant follicle selection in cattle. CARTPT expression is elevated in subordinate versus dominant follicles, and treatment with the mature form of the CARTPT peptide (CART) decreases follicle-stimulating hormone (FSH)-stimulated granulosa cell estradiol production in vitro and follicular fluid estradiol and granulosa cell CYP19A1 mRNA in vivo.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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