

# Human C-peptide Protein

HA211473



<b>Product name:</b>	Human C-peptide
<b>Species reactivity:</b>	Human
<b>Protein construction description:</b>	EAEDLQVGQVELGGGPGAGSLQPLALEGSLQ

**Background:** The connecting peptide, or C-peptide, is a short 31-amino-acid polypeptide that connects insulin's A-chain to its B-chain in the proinsulin molecule. In the context of diabetes or hypoglycemia, a measurement of C-peptide blood serum levels can be used to distinguish between different conditions with similar clinical features. In the insulin synthesis pathway, first proinsulin is translocated into the endoplasmic reticulum of beta cells of the pancreas as one polypeptide comprising the regions of the A-chain, C-peptide, B-chain, and signal sequence. The signal sequence is cleaved from the N-terminus of the peptide by a signal peptidase, leaving proinsulin. After proinsulin is packaged into vesicles in the Golgi apparatus (beta-granules), the C-peptide is removed, leaving the A-chain and B-chain bound together by disulfide bonds, that constitute the insulin molecule. C-peptide has virtually no affinity for the insulin receptor, however, it is known to promote the activity of at least two enzymes - the sodium-potassium pump and nitric oxide synthase - downstream of binding to a membrane structure (presumably a G protein-coupled receptor). Nevertheless, the physiological significance of these effects of C-peptide is unresolved.

**Fragment region:** C-peptide (57-87)

**Accession:** P01308-1

**Formulation:** Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.

**Reconstitution:** Reconstitute at 250 µg/ml in sterile water.

**Storage:** Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

Hangzhou Huaan Biotechnology Co., Ltd.

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**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

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