

## CALCB Protein, Human, Recombinant (hFc)

### General Information

Synonyms:	CGRP-II; calcitonin-related polypeptide $\beta$ ; calcitonin-related polypeptide beta; CALC2; CGRP2
Protein Construction:	Ala26-Phe118
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P10092
Molecular Weight:	37 kDa (predicted); 38-42 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/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, pH 7.4.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### 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

CALCB, also known as CGPR and calcitonin 2, belongs to the calcitonin family. CALCB is a calcitonin (CT) peptide which may play a role in the mediation of human inflammatory diseases. It is highly expressed in the skin, blood, and cerebrospinal fluid. CGRP immunolabeling (IL) was detected in epidermal keratinocytes at levels that were especially high and widespread in the skin of humans from locations afflicted with postherpetic neuralgia (PHN) and complex region pain syndrome type 1 (CRPS), of monkeys infected with simian immunodeficiency virus, and of rats subjected to L5/L6 spinal nerve ligation, sciatic nerve chronic constriction, and subcutaneous injection of

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complete Freund's adjuvant. Increased CGRP-IL was also detected in epidermal keratinocytes of transgenic mice with keratin-14 promoter driven overexpression of noggin, an antagonist to BMP-4 signaling. CGPR dilates a variety of vessels including the coronary, cerebral and systemic vasculature.

### Reference

Lambert NA. 2008, Sci Signal. 1 (25): re5.

Linscheid P. et al., 2005, Endocrinology. 146 (6): 2699-708.

Hou Q. et al., 2011, Pain. 152 (9): 2036-51.

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