## Recombinant Human Calumenin Protein (aa 20-315, His Tag)

### Catalog No. PKSH033293

Note: Centrifuge before opening to ensure complete recovery of vial contents.

| Description                 |                                                                                                                                                                                                                                                                     |  |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Synonyms                    | Calumenin;Crocalbin;IEF SSP 9302;CALU                                                                                                                                                                                                                               |  |
| Species                     | Human                                                                                                                                                                                                                                                               |  |
| Expression Host             | HEK293 Cells                                                                                                                                                                                                                                                        |  |
| Sequence                    | Lys20-Phe315                                                                                                                                                                                                                                                        |  |
| Accession                   | O43852                                                                                                                                                                                                                                                              |  |
| Calculated Molecular Weight | 36.0 kDa                                                                                                                                                                                                                                                            |  |
| Observed molecular weight   | 40-55 kDa                                                                                                                                                                                                                                                           |  |
| Tag                         | C-His                                                                                                                                                                                                                                                               |  |
| Bioactivity                 | Not validated for activity                                                                                                                                                                                                                                          |  |
| Properties                  |                                                                                                                                                                                                                                                                     |  |
| Purity                      | > 82 % as determined by reducing SDS-PAGE.                                                                                                                                                                                                                          |  |
| Endotoxin                   | < 1.0 EU per $\mu$ g of the protein as determined by the LAL method.                                                                                                                                                                                                |  |
| Storage                     | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.                               |  |
| Shipping                    | This product is provided as lyophilized powder which is shipped with ice packs.                                                                                                                                                                                     |  |
| Formulation                 | Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.4.<br>Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as<br>protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual. |  |
| Reconstitution              | Please refer to the printed manual for detailed information.                                                                                                                                                                                                        |  |
| Data                        |                                                                                                                                                                                                                                                                     |  |

Data

| МК | R  |
|----|----|
| -  |    |
| -  |    |
| -  |    |
| -  |    |
|    | MK |

> 82 % as determined by reducing SDS-PAGE.

## Background

Calumenin is a secreted calcium-binding protein that belongs to the CREC family. Calumenin contains six EF-hand domains and is expressed at high levels in the heart; placenta and skeletal muscle. Human Calumenin is synthesized as a

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315 amino acid precursor that contains a 19 amino acid signal sequence; and a 296 amino acid mature chain. Calumenin localizes to the endoplasmic reticulum (ER) and sarcoplasmic reticulum (SR) of mammalian tissues which plays a role in ER functions as protein folding and sorting. Calumenin is involved in the regulation of vitamin K-dependent carboxylation of multiple N-terminal glutamate residues. It seems to inhibit γ-carboxylase GGCX.

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