

## SG3/Secretogranin 3 Protein, Human, Recombinant (aa 20-468, His)

### General Information

Synonyms:	SCG3;Secretogranin III;UNQ2502/PRO5990;Secretogranin-3;SGIII
Protein Construction:	Phe20-Leu468
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8WXD2-1
Molecular Weight:	52.1 kDa (predicted). Due to glycosylation, the protein migrates to 55-68 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Immobilized Human SG3, His Tag at 0.2µg/ml (100µl/Well) on the plate. Dose response curve for Anti-SG3 Antibody, hFc Tag with the EC50 of 20.6ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/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

Secretogranin III (Scg3) is a member of the granin protein family that regulates the biogenesis of secretory granules. Scg3 was recently discovered as an angiogenic factor, expanding its functional role to extrinsic regulation. Unlike many other known angiogenic factors, the pro-angiogenic actions of Scg3 are restricted to pathological conditions. Among thousands of quantified endothelial ligands, Scg3 has the highest binding activity ratio to diabetic vs.

Reference

Li W, et al. Secretogranin III: a diabetic retinopathy-selective angiogenic factor. Cell Mol Life Sci. 2018 Feb;75(4): 635-647. doi: 10.1007/s00018-017-2635-5. Epub 2017 Aug 30. PMID: 28856381; PMCID: PMC5771826.

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