

# Recombinant Human Semaphorin-3G/SEMA3G Protein

Catalog No.: RP01400 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	56920	Q9NS98

### Tags

C-His

### Synonyms

SEMA3G;sem2

## Product Information

Source	Purification
HEK293 cells	> 90% by SDS-PAGE.

Calculated MW	Observed MW
87.54 kDa	100-115 kDa

### Endotoxin

Please contact us for more information.

### Formulation

Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Semaphorin 3G (Sema3G), also known as Semaphorin sem2, is a class 3 member of the semaphorin family initially identified as regulators of neuron-axonal guidance. More than 30 semaphorins have been discovered and are divided into eight classes: classes 1 and 4-7 are membrane-associated, while classes 2, 3, and 8 are in a secreted form. In vitro analysis shows Sema 3G binds to Neuropilin-2, which forms a receptor complex with Plexin-D1. Via this pathways Sema 3G controls lymphatic vascular patterning by the means of cellular collapse. It shows protective effects in ischemic retinopathies by coordinating interactions of beta -catenin and VE-Cadherin in endothelium. Sema 3G has been shown to be involved in adipocyte differentiation. Knockdown of Sema3G inhibited weight gain through PI3K/Akt/GSK3 beta signaling in the adipose tissue and the AMPK/SREBP-1c pathway in the liver. Thus, Sema 3G is an adipokine essential for adipogenesis, lipogenesis, and insulin resistance and is associated with obesity.

## Basic Information

### Description

Recombinant Human Semaphorin-3G/SEMA3G Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met1-Thr782) of human SEMA3G (Accession #NP\_064548.1) fused with a 6×His tag at the C-terminus.

### Bio-Activity

### Storage

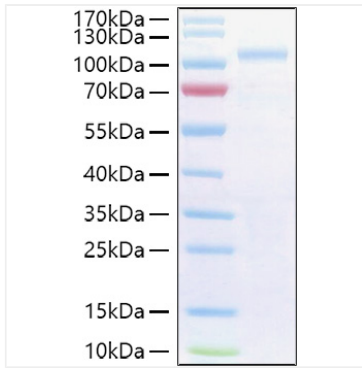
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human Semaphorin-3G/SEMA3G Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 100-115kDa.