

# 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 % as

determined 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 stablizer (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 Pl3K/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  $6\times His$  tag at the C-terminus.

## **Bio-Activity**

#### Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

## **Storage**

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

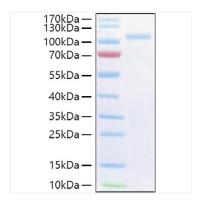
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

#### **Operational Notes**

For your safety and health, please wear a lab coat and disposable gloves for handling.

# **Validation Data**



Recombinant Human Semaphorin-3G/SEMA3G Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.