

# Human SEMA7A Protein

Cat. No. SEM-HM17A

## Description

<b>Source</b>	Recombinant Human SEMA7A Protein is expressed from HEK293 with His tag at the C-Terminus. It contains Gln45-Ala648.
<b>Accession</b>	O75326-1
<b>Molecular Weight</b>	The protein has a predicted MW of 69.5 kDa. Due to glycosylation, the protein migrates to 70-75 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 1EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

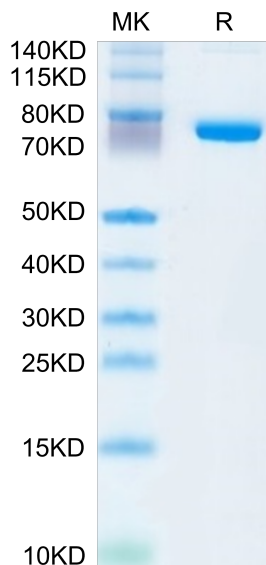
<b>Formulation</b>	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Semaphorin7A (Sema7A) plays an important role in the immunoregulation of the brain. Sema7A is upregulated in the epileptic brain and plays a potential role in the regulation of seizure activity in PTZ-kindled epileptic rats, which may be related to neuroinflammation. Sema7A promotes the inflammatory cytokines TNF-α and IL-6 as well as the growth of mossy fibers through the ERK pathway, suggesting that Sema7A may promote seizures by increasing neuroinflammation and activating pathological neural circuits. Sema7A plays a critical role in epilepsy and could be a potential therapeutic target for this neurological disorder.

## Assay Data

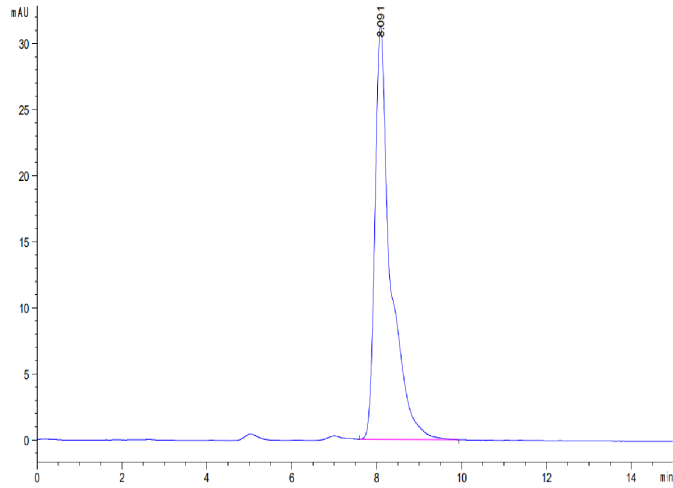
### Bis-Tris PAGE



Human SEMA7A on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

Assay Data



The purity of Human SEMA7A is greater than 95% as determined by SEC-HPLC.