

# Mouse SEMA7A Protein

Cat. No. SEM-MM17A

## Description

<b>Source</b>	Recombinant Mouse SEMA7A Protein is expressed from HEK293 with His tag at the C-Terminus. It contains Gln45-Ala646.
<b>Accession</b>	Q9QUR8
<b>Molecular Weight</b>	The protein has a predicted MW of 69.5 kDa. Due to glycosylation, the protein migrates to 70-80 kDa based on Tris-Bis PAGE result.
<b>Endotoxin</b>	Less than 1EU per $\mu$ g by the LAL method.
<b>Purity</b>	> 95% as determined by Tris-Bis PAGE

## Formulation and Storage

<b>Formulation</b>	Lyophilized from 0.22 $\mu$ m filtered solution in PBS, 200mM L-arginine (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 $\mu$ g/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. -20 to -80°C for 3-6 months in unopened state after reconstitution. 2-8°C for 2-7 days 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- $\alpha$  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

### Tris-Bis PAGE



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