

Human SEMA7A Protein

Cat. No. SEM-HM17A

Description

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

Formulation and Storage

Formulation	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
Storage	-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- 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

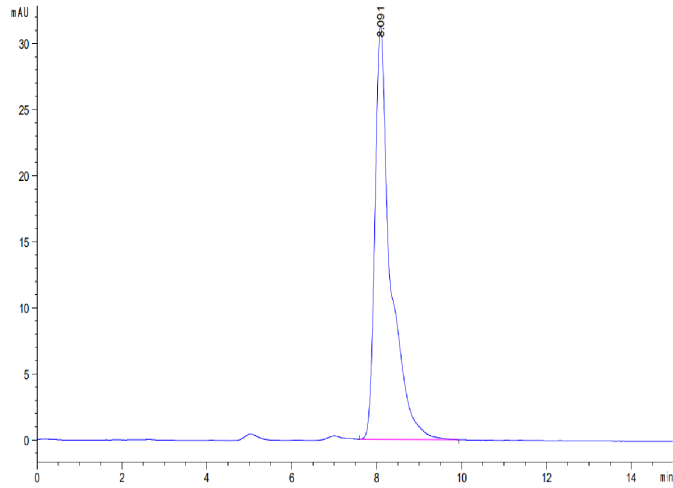
Tris-Bis PAGE



Human SEMA7A on Tris-Bis 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.