

## CAQK peptide

## Chemical Properties

CAS No. : 2088281-24-5

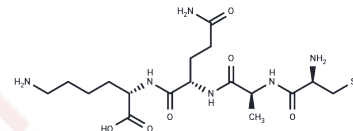
Formula: C17H32N6O6S

Molecular Weight: 448.54

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	CAQK peptide specifically binds to injured mouse brain tissue and targets demyelinating areas without affecting healthy tissue. It interacts with a proteoglycan complex that is upregulated in brain injuries, making it useful for drug delivery applications. Additionally, CAQK peptide can penetrate the blood-brain barrier [1] [2].
In vitro	FAM-CAQK selectively associates with brain injuries caused by localized or impact trauma, without interacting with healthy brain tissue or other organs. At the lesion sites, the peptide primarily binds to the fibrous extracellular matrix (ECM) deposited in the interstitial spaces near reactive astrocytes [1] [2].
In vivo	CAQK was employed in a murine model to address localized demyelination caused by acute hemolytic phospholipids. The specific dose administered was 100 nmoles in 100 $\mu$ L, delivered via tail vein injection at either 24 hours or five days post-injury, targeting the injury sites located in the right abdominal area. The subjects of the study were 8-week-old male C57BL/6J mice [1]. Research findings indicate that CAQK promotes an increased density of multinuclear DAPI+ cells and fragmented myelin at the injury site, along with an accumulation of peptide substances stained for with myelin basic protein staining. Contrarily, the control group, treated with PBS sham surgery, showed no presence of these peptide substances in the spinal cord and maintained normal DAPI+ cell density.

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.2295 mL	11.1473 mL	22.2946 mL
5 mM	0.4459 mL	2.2295 mL	4.4589 mL
10 mM	0.2229 mL	1.1147 mL	2.2295 mL
50 mM	0.0446 mL	0.2229 mL	0.4459 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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