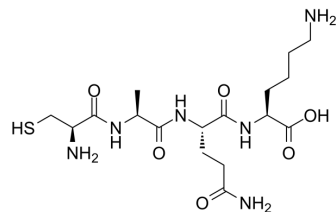


CAQK peptide

Cat. No.:	HY-P10216
CAS No.:	2088281-24-5
Molecular Formula:	C ₁₇ H ₃₂ N ₆ O ₆ S
Molecular Weight:	448.54
Sequence:	Cys-Ala-Glu-Lys
Sequence Shortening:	CAQK
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	CAQK peptide selectively binds to injured mouse brain. CAQK peptide selectively targets demyelinating areas and it is absent from healthy tissue. The CAQK peptide target is a proteoglycan complex upregulated in brain injuries and is used for drug delivery. CAQK peptide can penetrate the blood-brain barrier ^{[1][2]} .
In Vitro	FAM-CAQK selectively associates with focal and impact-induced brain lesions while not interacting with healthy brain and other tissues. At lesion sites, the peptide is primarily associated with the fibrous extracellular matrix (ECM) deposited in interstitial spaces proximal to reactive astrocytes ^{[1][2]} . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	CAQK (100 nmoles/100 µL into the tail vein; at 24 h or 5 days post-injury) homes to lysolecithin-induced focal lesions in the spinal cord. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	C57BL/6J 8-week-old male mice ^[1]
Dosage:	100 nmoles/100 µl in PBS
Administration:	Tail vein; at 24 h or 5 days post-injury (focal demyelination was induced by stereotaxic injection of 1 µL of 1% lysolecithin solution into the right ventral)
Result:	Caused the accumulation of peptide at the injury site by an increased density of mononucleated DAPI ⁺ cells and fragmented myelin stained for myelin basic protein. The peptide was not detected in the spinal cords of control sham-operated (PBS injected) mice showing regular densities of DAPI ⁺ cells.

REFERENCES

[1]. Charly Abi-Ghanem, et al. CAQK, a peptide associating with extracellular matrix components targets sites of demyelinating injuries. *Front Cell Neurosci.* 2022 Aug 22;16:908401.

Caution: Product has not been fully validated for medical applications. For research use only.

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