

CALP3

Cat. No.:	HY-P1075												
CAS No.:	261969-05-5												
Molecular Formula:	C ₄₄ H ₆₈ N ₁₀ O ₉												
Molecular Weight:	881.07												
Sequence:	Val-Lys-Phe-Gly-Val-Gly-Phe-Lys												
Sequence Shortening:	VKFGVGFK												
Target:	Calcium Channel												
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling												
Storage:	<table> <tr> <td>Powder</td> <td>-80°C</td> <td>2 years</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 year</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-80°C	2 years		-20°C	1 year	In solvent	-80°C	6 months		-20°C	1 month
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BIOLOGICAL ACTIVITY

Description	CALP3, a Ca ²⁺ -like peptide, is a potent Ca ²⁺ channel blocker that activates EF hand motifs of Ca ²⁺ -binding proteins. CALP3 can functionally mimic increased [Ca ²⁺] _i by modulating the activity of Calmodulin (CaM), Ca ²⁺ channels and pumps. CALP3 has the potential in controlling apoptosis in diseases such as AIDS or neuronal loss due to ischemia ^{[1][2]} .
IC₅₀ & Target	Ca ²⁺
In Vitro	<p>CALP3 (50, 100, 150, 200 μM) inhibits glutamate caused a large sustained increase in [Ca²⁺]_i in a dose-dependent manner (IC₅₀=37.25 μM) in Fura-2-loaded neuronal cultures^[1].</p> <p>CALP3 (50, 100, 150, 200 μM) inhibits glutamate-induced cytotoxicity in a dose-dependent manner (IC₅₀=50.97 μM) in cultured rat neocortical neurons. CALP3 causes dose-dependent inhibition of apoptosis (IC₅₀=33.41 μM)^[1].</p> <p>CALP3 (100 μM) inhibits apoptosis induced by HIV gp120 and SAg in Human T cells^[1].</p> <p>CALP3 (100 μM; 15 min pretreatment) reduces gossypol-induced necrosis and increases the fraction of live cells^[2].</p> <p>Cyclic-CALP3 is synthesized starting from Fmoc-Asp(PEG-PS)-OAl. Cyclic CALP3 is unable to inhibit Ca_v2.1 influx, and this peptide served as a negative control. Cyclic CALP3 does not inhibit the effect of glutamate^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Manion MK, et al. A new type of Ca(2+) channel blocker that targets Ca(2+) sensors and prevents Ca(2+)-mediated apoptosis. *FASEB J.* 2000 Jul;14(10):1297-306.
- [2]. Ferdek PE, et al. BH3 mimetic-elicited Ca²⁺ signals in pancreatic acinar cells are dependent on Bax and can be reduced by Ca²⁺-like peptides. *Cell Death Dis.* 2017 Mar 2;8(3):e2640.

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

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