

QEQLERALNSS TFA

Cat. No.:	HY-P3868A
Molecular Formula:	C ₅₃ H ₈₈ F ₃ N ₁₇ O ₂₃
Molecular Weight:	1388.36
Sequence Shortening:	QEQLERALNSS
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	QEQLERALNSS TFA is a helix B surface peptide (HBSP) derived from erythropoietin with tissue protective activities. QEQLERALNSS TFA protects cardiomyocytes from apoptosis ^[1] .																
In Vitro	<p>QEQLERALNSS (2.5 and 25 ng/mL; 12 h) clearly decreases TNF-α-induced apoptosis of cardiomyocytes^[1]. QEQLERALNSS (2.5 ng/mL; 5 min) activates critical signaling pathways of cell survival, including Akt, ERK1/2, and STAT3 in cardiomyocytes^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Cardiomyocytes</td> </tr> <tr> <td>Concentration:</td> <td>2.5 and 25 ng/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>12 h</td> </tr> <tr> <td>Result:</td> <td>Decreased the number of apoptotic cells (\approx80% pretreatment, \approx60% without pretreatment) induced by TNF-α (50 pg/mL).</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Cardiomyocytes</td> </tr> <tr> <td>Concentration:</td> <td>2.5 ng/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>5 min</td> </tr> <tr> <td>Result:</td> <td>Rapidly activated Akt, ERK1/2, and STAT3 with a peak at 1 min after incubation.</td> </tr> </table>	Cell Line:	Cardiomyocytes	Concentration:	2.5 and 25 ng/mL	Incubation Time:	12 h	Result:	Decreased the number of apoptotic cells (\approx 80% pretreatment, \approx 60% without pretreatment) induced by TNF- α (50 pg/mL).	Cell Line:	Cardiomyocytes	Concentration:	2.5 ng/mL	Incubation Time:	5 min	Result:	Rapidly activated Akt, ERK1/2, and STAT3 with a peak at 1 min after incubation.
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In Vivo	<p>QEQLERALNSS (8 nmol/kg; i.p.; daily for 2 weeks) shows protective effects on ischemia reperfusion and Cyclosporin A (HY-B0579) induced renal injury in rats^[2]. QEQLERALNSS (30 μg/kg; s.c.; three times a week for 6 month) results in a significant decrease in the number of apoptotic cardiomyocytes in the cardiac sections compared with the control in DCM hamsters^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>																

Animal Model:	Male Sprague-Dawley rats, renal IR injury model ^[2]
Dosage:	8 nmol/kg
Administration:	Intraperitoneal injection, once a day for 2 weeks
Result:	Decreased the level of blood urea nitrogen and tubulointerstitial damage induced by Cyclosporin A (HY-B0579). Reduced apoptotic cells, myeloperoxidase (MPO)+ cells and active caspase-3+ cells.

REFERENCES

[1]. Ueba H, et al. Cardioprotection by a nonerythropoietic, tissue-protective peptide mimicking the 3D structure of erythropoietin. Proc Natl Acad Sci U S A. 2010 Aug 10;107(32):14357-62.

[2]. Wu Y, et al. Protective effects of HBSP on ischemia reperfusion and cyclosporine a induced renal injury. Clin Dev Immunol. 2013;2013:758159.

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

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