

## MK2-IN-5

<b>Cat. No.:</b>	HY-P10072
<b>CAS No.:</b>	474713-20-7
<b>Molecular Formula:</b>	C <sub>61</sub> H <sub>113</sub> N <sub>21</sub> O <sub>16</sub>
<b>Molecular Weight:</b>	1396.68
<b>Sequence:</b>	Lys-Lys-Lys-Ala-Leu-Asn-Arg-Gln-Leu-Gly-Val-Ala-Ala
<b>Sequence Shortening:</b>	KKKALNRQLGVAA
<b>Target:</b>	ERK; JNK; p38 MAPK; HSP; MAPKAPK2 (MK2)
<b>Pathway:</b>	MAPK/ERK Pathway; Stem Cell/Wnt; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	MK2-IN-5 is a Mk2 pseudosubstrate (K <sub>i</sub> = 8 μM). MK2-IN-5 targets the protein interaction domain in the MAPK pathway. MK2-IN-5 inhibits HSP25 and HSP27 phosphorylation <sup>[1][2][3]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	ERK1	ERK2
<b>In Vitro</b>	MK2-IN-5 (5-10 μM, 2 h) inhibits TGF-β1 induced connective tissue growth factor (CTGF) and collagen type I in primary human keloid fibroblasts <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
<b>In Vivo</b>	MK2-IN-5 (2 mg/kg Intraperitoneal injection, single dose) decreased HSP25 phosphorylation in ventilator-associated lung injury model <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	<b>Animal Model:</b>	ventilator-associated lung injury model <sup>[2]</sup>
	<b>Dosage:</b>	2 mg/kg
	<b>Administration:</b>	Intraperitoneal injection (i.p.)
	<b>Result:</b>	Decreased HSP25 phosphorylation.

### REFERENCES

- [1]. Gaestel M, et al. Peptides as signaling inhibitors for mammalian MAP kinase cascades [J]. Current pharmaceutical design, 2009, 15(21): 2471-2480.
- [2]. Damarla M, et al. Mitogen activated protein kinase activated protein kinase 2 regulates actin polymerization and vascular leak in ventilator associated lung injury [J]. PloS one, 2009, 4(2): e4600.
- [3]. Lopes L B, et al. Inhibition of HSP27 phosphorylation by a cell-permeant MAPKAP Kinase 2 inhibitor [J]. Biochemical and biophysical research communications, 2009,

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA