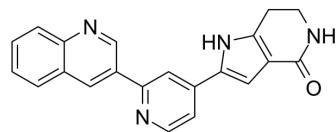


## MK2-IN-3

Cat. No.:	HY-131249
CAS No.:	724711-21-1
Molecular Formula:	C <sub>21</sub> H <sub>16</sub> N <sub>4</sub> O
Molecular Weight:	340.38
Target:	MAPKAPK2 (MK2)
Pathway:	MAPK/ERK Pathway
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 62.5 mg/mL (183.62 mM; Need ultrasonic)

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mg	5 mg	10 mg
1 mM			2.9379 mL	14.6895 mL	29.3789 mL
5 mM			0.5876 mL	2.9379 mL	5.8758 mL
10 mM			0.2938 mL	1.4689 mL	2.9379 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

MK2-IN-3 is a potent and selective inhibitor of MAPKAP-K2 (MK-2), with an IC<sub>50</sub> of 8.5 nM. MK2-IN-3 shows selectivity for MK-2 over MK-3, MK-5, ERK2, MNK1, p38a (IC<sub>50</sub>s=0.21, 0.081, 3.44, 5.7, and >100 μM, respectively) and MSK1, MSK2, CDK2, JNK2, IKK2 (IC<sub>50</sub>s>200 μM). MK2-IN-3 can reduce TNFα production in both U937 cells and in vivo<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

IC<sub>50</sub>: 8.5 nM (MK-2); 81 nM (MK-5); 210 nM (MK-3); 3.44 μM (ERK2); 5.7 μM (MNK1)<sup>[1]</sup>

#### In Vitro

MK2-IN-3 (compound 16) inhibits MK-2 and TNFα production in U937 cells, with IC<sub>50</sub>s of 8.5 nM and 4.4 μM, respectively<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

MK2-IN-3 (compound 16) (20 mg/kg; a single p.o. before LPS challenge) inhibits 20% TNFα production in rat LPS (rLPS) model<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### CUSTOMER VALIDATION

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- J Biol Chem. 2023 Apr 12;104699.

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## REFERENCES

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[1]. Anderson DR, et, al. Pyrrolopyridine inhibitors of mitogen-activated protein kinase-activated protein kinase 2 (MK-2). J Med Chem. 2007 May 31;50(11):2647-54.

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**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