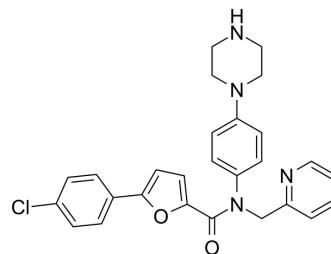


MK2-IN-1

Cat. No.:	HY-12834
CAS No.:	1314118-92-7
Molecular Formula:	C ₂₇ H ₂₅ ClN ₄ O ₂
Molecular Weight:	473
Target:	MAPKAPK2 (MK2); HSP
Pathway:	MAPK/ERK Pathway; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	MK2-IN-1 (compound 1) is a potent and selective MAPKAPK2 (MK2) inhibitor with an IC ₅₀ of 0.11 μM for MK2 and an EC ₅₀ of 0.35 μM for pHSP27. MK2-IN-1 impairs the phosphorylation level of serine residues in the Tfcp2l1 protein ^{[1][2]} .								
In Vitro	<p>MK2-IN-1 (purchased from MCE; 5 μM; 0.5-8 h) gradually increases Tfcp2l1 protein level without a change in the Tfcp2l1 transcript level within 2 h^[2].</p> <p>MK2-IN-1 induces more alkaline phosphatase (AP)-positive colonies than the other factors in a short time^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>46C mouse embryonic stem cells (mESCs)</td> </tr> <tr> <td>Concentration:</td> <td>5 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>0.5, 1, 2, 8 h</td> </tr> <tr> <td>Result:</td> <td>The Tfcp2l1 protein level gradually increased without a change in the Tfcp2l1 transcript level within 2 h.</td> </tr> </table>	Cell Line:	46C mouse embryonic stem cells (mESCs)	Concentration:	5 μM	Incubation Time:	0.5, 1, 2, 8 h	Result:	The Tfcp2l1 protein level gradually increased without a change in the Tfcp2l1 transcript level within 2 h.
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Result:	The Tfcp2l1 protein level gradually increased without a change in the Tfcp2l1 transcript level within 2 h.								

CUSTOMER VALIDATION

- Cell Death Dis. 2021 Oct 23;12(11):994.
- Cell Rep. 2021 Nov 2;37(5):109949.

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REFERENCES

- [1]. Yan Zhang, et al. MK2 promotes Tfcp2l1 degradation via β-TrCP ubiquitin ligase to regulate mouse embryonic stem cell self-renewal. Cell Rep. 2021 Nov 2;37(5):109949.
- [2]. Rao AU, et al. Facile synthesis of tetracyclic azepine and oxazocine derivatives and their potential as MAPKAP-K2 (MK2) inhibitors. Bioorg Med Chem Lett. 2012 Jan

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

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