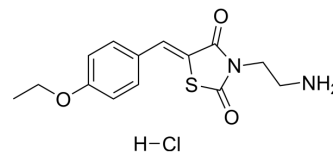


## ERK-IN-4

<b>Cat. No.:</b>	HY-113592
<b>CAS No.:</b>	1049738-54-6
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>17</sub> ClN <sub>2</sub> O <sub>3</sub> S
<b>Molecular Weight:</b>	328.81
<b>Target:</b>	ERK
<b>Pathway:</b>	MAPK/ERK Pathway; Stem Cell/Wnt
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 25 mg/mL (76.03 mM); ultrasonic and warming and heat to 80°C				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	3.0413 mL	15.2064 mL	30.4127 mL
		5 mM	0.6083 mL	3.0413 mL	6.0825 mL
		10 mM	0.3041 mL	1.5206 mL	3.0413 mL
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (7.60 mM); Clear solution; Need ultrasonic  2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (7.60 mM); Clear solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	ERK-IN-4 is an ERK inhibitor binds preferentially to ERK2 with a K <sub>d</sub> of 5 μM. ERK-IN-4 specificity inhibits ERK Rsk-1 and Elk-1 phosphorylation. ERK-IN-4 has little effect on ERK protein phosphorylation by its upstream activator MEK1/2 <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	ERK2 5 μM (Kd)
<b>In Vitro</b>	ERK-IN-4 (Compound 76; 10-75 μM; 10 days) completely inhibits cell proliferation, and decreases number of cell colonies <sup>[1]</sup> . ERK-IN-4 (Compound 76; 100 μM) inhibits ERK-mediated phosphorylation of Rsk-1 on Thr573 and ERK-mediated Elk-1 phosphorylation in HeLa cells <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Proliferation Assay <sup>[1]</sup>

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Cell Line:	HeLa, A549, or SUM-159 cells
Concentration:	10 $\mu$ M, 20 $\mu$ M, 30 $\mu$ M, 40 $\mu$ M, 150 $\mu$ M for A549, or SUM-159 cells; 25 $\mu$ M, 50 $\mu$ M, 75 $\mu$ M for HeLa cells
Incubation Time:	10 days
Result:	Completely inhibited cell proliferation.

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## REFERENCES

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[1]. Chad N Hancock, et al. Identification of novel extracellular signal-regulated kinase docking domain inhibitors. J Med Chem. 2005 Jul 14;48(14):4586-95.

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

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