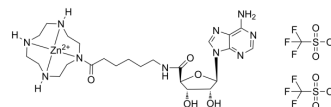


## UBA5-IN-1

<b>Cat. No.:</b>	HY-148266		
<b>CAS No.:</b>	1831169-11-9		
<b>Molecular Formula:</b>	C <sub>26</sub> H <sub>40</sub> F <sub>6</sub> N <sub>10</sub> O <sub>11</sub> S <sub>2</sub> Zn		
<b>Molecular Weight:</b>	912.16		
<b>Target:</b>	E1/E2/E3 Enzyme		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMF : 100 mg/mL (109.63 mM; Need ultrasonic)  
 DMSO : 50 mg/mL (54.81 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.0963 mL	5.4815 mL	10.9630 mL
	5 mM	0.2193 mL	1.0963 mL	2.1926 mL
	10 mM	0.1096 mL	0.5481 mL	1.0963 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMF >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 1.25 mg/mL (1.37 mM); Clear solution
- Add each solvent one by one: 10% DMF >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 1.25 mg/mL (1.37 mM); Clear solution
- Add each solvent one by one: 10% DMF >> 90% corn oil  
Solubility: ≥ 1.25 mg/mL (1.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 1.25 mg/mL (1.37 mM); Clear solution
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### BIOLOGICAL ACTIVITY

<b>Description</b>	UBA5-IN-1 (compound 8.5) is a selective UBA5 inhibitor with an IC <sub>50</sub> value of 4.0 μM. UBA5-IN-1 inhibits cell proliferation of Sk-Luci6 cancer cells with high expression levels of UBA5 <sup>[1]</sup> .									
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 4.0 μM (UBA5), 78.5 μM (UAE), 66.8 μM (NAE) <sup>[1]</sup>									
<b>In Vitro</b>	<p>UBA5-IN-1 (0.1-1000 μM) shows dose-dependent inhibition effect to UBA5 with an IC<sub>50</sub> value of 4.0 μM, and inhibits UAE and NAE with IC<sub>50</sub> values of 78.5 and 66.8 μM, respectively<sup>[1]</sup>.</p> <p>UBA5-IN-1 (0-5 μM) inhibits UBA5 non-competitively with respect to ATP<sup>[1]</sup>.</p> <p>UBA5-IN-1 (10 μM) shows no effect on ATP binding to human kinase<sup>[1]</sup>.</p> <p>UBA5-IN-1 (0-50 μM; 72 h) effects cell proliferation of Sk-Luci6 cancer cells with high expression levels of UBA5<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>Sk-Luci6 cancer cells with high expression levels of UBA5</td> </tr> <tr> <td>Concentration:</td> <td>0-50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>0-72 h</td> </tr> <tr> <td>Result:</td> <td>Showed selective anti-proliferative activity for Sk-Luci6 cancer cells which expressed higher UBA5 protein levels, but showed no anti-proliferative activity to MRC9 lung fibroblasts and A549 carcinoma cells.</td> </tr> </table>		Cell Line:	Sk-Luci6 cancer cells with high expression levels of UBA5	Concentration:	0-50 μM	Incubation Time:	0-72 h	Result:	Showed selective anti-proliferative activity for Sk-Luci6 cancer cells which expressed higher UBA5 protein levels, but showed no anti-proliferative activity to MRC9 lung fibroblasts and A549 carcinoma cells.
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Result:	Showed selective anti-proliferative activity for Sk-Luci6 cancer cells which expressed higher UBA5 protein levels, but showed no anti-proliferative activity to MRC9 lung fibroblasts and A549 carcinoma cells.									

## REFERENCES

[1]. da Silva SR, et al. A selective inhibitor of the UFM1-activating enzyme, UBA5. *Bioorg Med Chem Lett.* 2016 Sep 15;26(18):4542-4547.

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

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