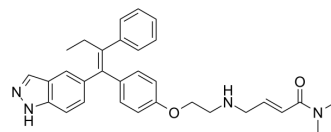


## H3B-5942

<b>Cat. No.:</b>	HY-112611		
<b>CAS No.:</b>	2052128-15-9		
<b>Molecular Formula:</b>	C <sub>31</sub> H <sub>34</sub> N <sub>4</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	494.63		
<b>Target:</b>	Estrogen Receptor/ERR		
<b>Pathway:</b>	Vitamin D Related/Nuclear Receptor		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 83.33 mg/mL (168.47 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.0217 mL	10.1086 mL	20.2171 mL
		5 mM	0.4043 mL	2.0217 mL	4.0434 mL
		10 mM	0.2022 mL	1.0109 mL	2.0217 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: ≥ 2.08 mg/mL (4.21 mM); Clear solution  2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.21 mM); Clear solution				

### BIOLOGICAL ACTIVITY

<b>Description</b>	H3B-5942 is a selective, irreversible and orally active estrogen receptor covalent antagonist, inactivates both wild-type and mutant ERα by targeting Cys530, with K <sub>i</sub> s of 1 nM and 0.41 nM, respectively. H3B-5942 reduces ERα target gene GREB1, shows potent antitumor activity both in multiple cell lines or animals bearing ERα <sup>WT</sup> or ERα mutations <sup>[1]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	ERα <sup>Y537S</sup> 0.41 nM (K <sub>i</sub> )	ERα <sup>WT</sup> 1 nM (K <sub>i</sub> )
<b>In Vitro</b>	H3B-5942 is a selective and irreversible estrogen receptor covalent antagonist, inactivates both wild-type and mutant ERα by targeting Cys530, with K <sub>i</sub> s of 1 nM and 0.41 nM, respectively <sup>[1]</sup> . H3B-5942 elevates ERα protein level distinct from SERMs/SERD, blocks ERα-dependent transcription in breast cancer cells.	

H3B-5942 (0.01-10  $\mu$ M) reduces ER $\alpha$  target gene GREB1 in MCF7-ER $\alpha$ <sup>WT</sup>, various MCF7-ER $\alpha$ MUT lines, and the PDX-ER $\alpha$ <sup>Y537S</sup>/WT line<sup>[1]</sup>.

H3B-5942 also decreases proliferation of MCF7-Parental, MCF7-LTED-ER $\alpha$ <sup>WT</sup>, and MCF7-LTED-ER $\alpha$ <sup>Y537C</sup> lines with GI<sub>50</sub>s of 0.5, 2, and 30 nM, respectively. H3B-5942 (10-25 nM) in combination with CDK4/6 inhibitors ( $\geq$ 25 pM) has synergic inhibitory effect on multiple cell lines bearing ER $\alpha$ <sup>WT</sup> or clinically frequent ER $\alpha$  mutations<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

H3B-5942 (1, 3, 10, or 30 mg/kg, p.o, q.d. for 17 days) dose-dependently inhibits tumor growth in MCF7 xenograft model in athymic female nude mice<sup>[1]</sup>.

H3B-5942 (3, 10, 30, 100, and 200 mg/kg, p.o, q.d.) exhibits similar anti-tumor activity in the ER $\alpha$ <sup>Y537S/WT</sup> ST941 model in athymic female nude mice<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	MCF7 xenograft model in athymic female nude mice <sup>[1]</sup>
Dosage:	1, 3, 10, or 30 mg/kg
Administration:	P.O. once a day (q.d. $\times$ 1) for 17 days
Result:	Exhibited tumor growth inhibition (TGI) on day 17 of 19%, 41%, 68%, and 83%, respectively.

## REFERENCES

[1]. Puyang X, et al. Discovery of Selective Estrogen Receptor Covalent Antagonists for the Treatment of ER $\alpha$ WT and ER $\alpha$ MUT Breast Cancer. Cancer Discov. 2018 Sep;8(9):1176-1193.

**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

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