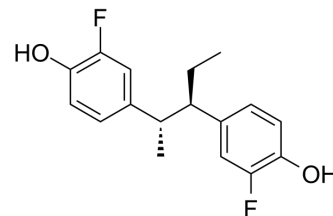


## Bifluranol

<b>Cat. No.:</b>	HY-U00229		
<b>CAS No.:</b>	34633-34-6		
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>18</sub> F <sub>2</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	292.32		
<b>Target:</b>	Androgen Receptor		
<b>Pathway:</b>	Others		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (342.09 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	3.4209 mL	17.1045 mL	34.2091 mL
		5 mM	0.6842 mL	3.4209 mL	6.8418 mL
10 mM		0.3421 mL	1.7105 mL	3.4209 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 (8.55 mM); Clear solution  2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.55 mM); Clear solution				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Bifluranol (BX341) is an anti-androgen.
<b>IC<sub>50</sub> &amp; Target</b>	Androgen Receptor <sup>[1]</sup>
<b>In Vivo</b>	<p>The absorption, distribution and excretion of Bifluranol have been studied in mouse, rat, ferret and dog; Bifluranol is readily absorbed following oral administration, but blood concentrations of Bifluranol are low due to hepatic uptake and biliary excretion. After intravenous administration of [<sup>3</sup>H]Bifluranol to rats (200 µg/kg) and ferrets (60 µg/kg) the blood concentrations of <sup>3</sup>H decreases rapidly for the first 2 to 3 h, with the decrease being more rapid in females (18 min for rat, 30 min for ferret) than males (1.0 h for rat, 1.4 h for ferret). This is followed by a much slower decline (40 h for rat, 20 h for ferret) to concentrations at 96 h of less than 15 ng Bifluranol equivalents mL<sup>-1</sup> (rat) or 1 ng Bifluranol equivalents mL<sup>-1</sup> (ferret)<sup>[1]</sup>.</p>

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

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## PROTOCOL

### Animal Administration <sup>[1]</sup>

#### Mice, Rats, Dogs and Ferrets<sup>[1]</sup>

Swiss albino mice (24-28 g, males age 4 weeks, females age 6 weeks; pregnant mice mated at 6 weeks, used at day 18 of pregnancy) and Wistar albino rats (200 g males age 6 weeks, females age 8 weeks; 350 g males age 10 weeks) are fed Dixon's mouse and rat diet and have free access to water. Albino ferrets (0.7-2.6 kg, age 9-15 months) are fed raw meat, bread and milk. Male beagles (10.8-12.3 kg, age 10-14 years) are fed Spratt's complete dog diet. [<sup>3</sup>H]Bifluranol administration is by intragastric intubation, in propylene glycol (mouse 0.1 ml, rat 0.1-0.2 mL, ferret 0.1-0.4 mL and dog 1 mL), except for the dog 96 h excretion study when the drug is absorbed onto starch and given in a gelatin capsule. Bifluranol is given intravenously in propylene glycol-0.9% NaCl (saline) (1 : 1 v/v) (0.1-0.2 mL), via a tail vein in mice and rats and the jugular vein in ferrets (under ether anaesthesia). [<sup>3</sup>H]Bifluranol (2 mg/kg, 1.1 mCi) is administered orally or intravenously to male, female and pregnant mice. After various time intervals they are killed under ether anaesthesia by immersion in solid CO<sub>2</sub>-hexane (-70°C). The tail, limbs and ears are removed. The animals shaved, embedded and frozen in 5 % aq. acacia wax. The animal blocks are cut using a Slee whole-body freezing microtome to obtain lateral sections (30 µm) which are exposed to X-ray film at 4°C and the auto-radiograms examined after 1,3 or 6 months. [<sup>3</sup>H]Bifluranol is administered orally or intravenously to rats (200 µg/kg, 0.86-1.0 mCi), ferrets (60 µg/kg, 5.0-10.6 mCi) and orally only to dogs (50 µg/kg, 70-76 mCi). Blood samples (10-100 µL) are taken for radioactivity determination at time intervals up to 96 h (rat and ferret) or 6 h (dog).

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## REFERENCES

[1]. Pope DJ, et al. Bifluranol, a novel fluorinated bibenzyl anti-androgen, its chemistry and disposition in different animal species. *J Pharm Pharmacol.* 1981 May;33(5):297-301.

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

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