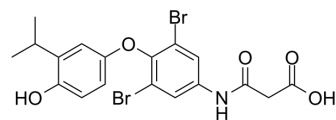


## Eprotirome

Cat. No.:	HY-10473	
CAS No.:	355129-15-6	
Molecular Formula:	C <sub>18</sub> H <sub>17</sub> Br <sub>2</sub> NO <sub>5</sub>	
Molecular Weight:	487.14	
Target:	Thyroid Hormone Receptor	
Pathway:	Others	
Storage:	Powder	-20°C 3 years
	In solvent	-80°C 6 months
		-20°C 1 month



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (256.60 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.0528 mL	10.2640 mL	20.5280 mL
		5 mM	0.4106 mL	2.0528 mL	4.1056 mL
		10 mM	0.2053 mL	1.0264 mL	2.0528 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.27 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.27 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.27 mM); Clear solution				

### BIOLOGICAL ACTIVITY

Description	Eprotirome (KB2115) is a liver-selective thyroid hormone receptor (TR) agonist. KB2115 has modestly higher affinity for TR $\beta$ than for TR $\alpha$ . Eprotirome reduces low-density lipoprotein (LDL) cholesterol concentrations. Eprotirome can be used for dyslipidemias and obesity research <sup>[1][2]</sup> .
IC <sub>50</sub> & Target	Thyroid hormone receptor <sup>[1]</sup>
In Vivo	Eprotirome is a liver-selective thyroid hormone receptor agonist. Histological analysis of livers from mice treated with Eprotirome reveals that Eprotirome elicits a near complete elimination of lipid filled vacuoles that are characteristic of the

livers from untreated control mice. Eprotirome treated mice also exhibit increased fasting glucose, but Eprotirome does not increase fasting insulin levels. Glucose levels of mice treated with Eprotirome continues to increase over time, leading to pronounced hyperglycemia by the end of the study. Temperature of mice treated with Eprotirome is decreased relative to untreated control mice<sup>[1]</sup>.

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

## PROTOCOL

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

Twelve-week old male ob/ob mice are used in this study. A catheter is implanted into the right internal jugular vein before the hyperinsulinemic-euglycemic clamp. After recovery, mice are administered Eprotirome (0.3 mg/kg) via intraperitoneal injection for 10 days. On the day of the clamp experiment, conscious, overnight-fasted mice receive a primed (10  $\mu$ Ci) and constant rate intravenous infusion (0.1  $\mu$ Ci /min) of [3-<sup>3</sup>H] glucose to measure basal glucose turnover. After 60 to 75 minutes of labeled glucose infusion, the hyperinsulinemic-euglycemic clamp is performed with continuous infusion of insulin (12 mU/kg/min) and variable infusion of 25% glucose to maintain euglycemia (~120 mg/dL). Blood samples are collected by tail bleeding (approximately every 10 min) to measure blood glucose concentrations<sup>[1]</sup>.

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

## REFERENCES

[1]. Martagón AJ, et al. The amelioration of hepatic steatosis by thyroid hormone receptor agonists is insufficient to restore insulin sensitivity in ob/ob mice. PLoS One. 2015 Apr 7;10(4):e0122987.

[2]. Rosalba Senese, et al. Thyroid hormone metabolites and analogues. Endocrine. 2019 Oct;66(1):105-114.

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

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