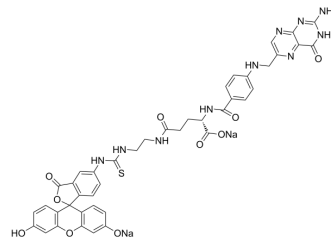


## EC-17 disodium salt

<b>Cat. No.:</b>	HY-13615A
<b>CAS No.:</b>	910661-33-5
<b>Molecular Formula:</b>	C <sub>42</sub> H <sub>34</sub> N <sub>10</sub> Na <sub>2</sub> O <sub>10</sub> S
<b>Molecular Weight:</b>	916.82
<b>Target:</b>	Fluorescent Dye
<b>Pathway:</b>	Others
<b>Storage:</b>	-20°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 40 mg/mL (43.63 mM; Need ultrasonic)				
	H <sub>2</sub> O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	1.0907 mL	5.4536 mL	10.9073 mL
	5 mM	0.2181 mL	1.0907 mL	2.1815 mL	
	10 mM	0.1091 mL	0.5454 mL	1.0907 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: 1.6 mg/mL (1.75 mM); Suspended solution; Need ultrasonic  2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 1.6 mg/mL (1.75 mM); Suspended solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	EC-17 (disodium salt) is a folate receptor alpha (FRα) targeting contrast agent with fluorescent properties in the visible light spectrum. The peak excitation and emission wavelengths of EC-17 are 470/520 nm.
<b>IC<sub>50</sub> &amp; Target</b>	Folate receptor alpha <sup>[1]</sup>
<b>In Vitro</b>	EC-17 contains the fluorescein fluorochrome and has a spectral wavelength of 490-530 nm. EC-17 is synthesized by a folate (vitamin B9) and fluorescein isothiocyanate (FITC) conjugated through an ethylenediamine spacer to produce folate-FITC, with a molecular weight of 917 kDa. FITC is a derivative of fluorescein functionalized with an isothiocyanate reactive group. The folate-FITC conjugate forms a negatively charged fluorescent molecule that specifically targets cell-surface FRα and is subsequently internalized into the cytoplasm. The signal-to-background ratio (SBR) of EC-17 for HeLa cells range from 0.97

to 7.32 depending on the molarity and concentration of cancer cells<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

The mean fluorescence signal from the animals injected with EC-17 to be  $42,234 \pm 12,234$  au<sup>[1]</sup>. Fluorescence microscopy for folate-FITC shows a strong signal in all malignant tumors with FR- $\alpha$  expression and no signal in FR- $\alpha$ -negative malignant or benign lesions<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

#### Cell Assay <sup>[1]</sup>

KB, HeLa, and TC1 cells are plated on a cell culture treated 6-well plate and incubated for 16 hours. Once confluent, EC-17 is added cells. The cells are incubated and sealed in a light-protected environment for 45 minutes. Cells are then washed 3 times with PBS and plated and underwent fluorescence microscopy<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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

Mice<sup>[1]</sup>  
Mice are injected subcutaneously in the flank with  $1.2 \times 10^6$  TC1 cells (C57BL/6 mice),  $1.0 \times 10^6$  HeLa cells (NOD.Cg-Prkdc<sup>scid</sup> Il2rg<sup>tm1Wjl/SzJ</sup> mice), or  $1.0 \times 10^6$  KB cells (NOD.Cg-Prkdc<sup>scid</sup>, Il2rg<sup>tm1Wjl/SzJ</sup> mice). Once tumor volume reached approximately  $300 \text{ mm}^3$  half of the mice are injected with 0.1 mg/kg of EC-17 and the other half with 0.1 mg/kg of OTL38 via tail vein. Three hours later, the fluorescence of tumors is measured using Flocam<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Tummers QR, et al. Intraoperative imaging of folate receptor alpha positive ovarian and breast cancer using the tumor specific agent EC17. Oncotarget. 2016 May 31;7(22):32144-55.

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

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