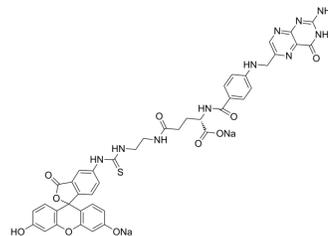


EC-17 disodium salt

Cat. No.:	HY-13615A
CAS No.:	910661-33-5
Molecular Formula:	C ₄₂ H ₃₄ N ₁₀ Na ₂ O ₁₀ S
Molecular Weight:	916.82
Target:	Fluorescent Dye
Pathway:	Others
Storage:	-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

In Vitro	DMSO : 40 mg/mL (43.63 mM; Need ultrasonic)				
	H ₂ O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	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.					
In Vivo	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

Description	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.
IC₅₀ & Target	Folate receptor alpha ^[1]
In Vitro	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^[1].
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^[1]. Fluorescence microscopy for folate-FITC shows a strong signal in all malignant tumors with FR- α expression and no signal in FR- α -negative malignant or benign lesions^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]

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^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Administration ^[1]

Mice^[1]
Mice are injected subcutaneously in the flank with 1.2×10^6 TC1 cells (C57BL/6 mice), 1.0×10^6 HeLa cells (NOD.Cg-Prkdc^{scid} Il2rg^{tm1Wjl/SzJ} mice), or 1.0×10^6 KB cells (NOD.Cg-Prkdc^{scid}, Il2rg^{tm1Wjl/SzJ} mice). Once tumor volume reached approximately 300 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^[1].
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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