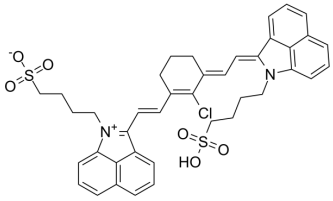
FD-1080 free acid

Cat. No.:	HY-133852A
CAS No.:	1151888-25-3
Molecular Formula:	$C_{40}H_{39}ClN_2O_6S_2$
Molecular Weight:	743.33
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

BIOLOGICAL ACTIVITY

Description	FD-1080 free acid is a fluorophore with both excitation and emission in the NIR-II region (Ex=1064 nm, Em=1080 nm). FD-1080 free acid can be used for in vivo imaging[1].
In Vitro	FD-1080 shows superior photostability under the continuous laser irradiation. The quantum yield of FD-1080 is 0.31%, and can be increased to 5.94% after combining with fetal bovine serum (FBS) to form FD-1080-FBS complexes[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The 1064 nm NIR-II excitation of FD-1080 is demonstrated with the high tissue penetration depth and superior imaging resolution compared to NIR excitation from 650 nm to 980 nm. Deeptissue and high-resolution in vivo imaging for the left hindlimb vasculature, abdomen, and brain vessels was realized, allowing penetration through intact skin, tissue, and skull. FD-1080 also quantifying the respiratory rate based on the dynamic imaging of respiratory craniocaudal motion of the liver for the awake and anaesthetized mouse[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Advanced Therapeutics. 10 September 2022.

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REFERENCES

[1]. Benhao Li, et al. An Efficient 1064 nm NIR-II Excitation Fluorescent Molecular Dye for Deep-Tissue High-Resolution Dynamic Bioimaging. Angew Chem Int Ed Engl. 2018

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