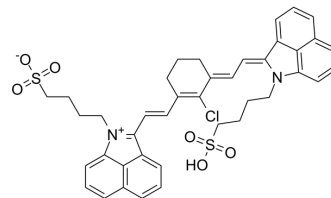


## FD-1080 free acid

<b>Cat. No.:</b>	HY-133852A
<b>CAS No.:</b>	1151888-25-3
<b>Molecular Formula:</b>	C <sub>40</sub> H <sub>39</sub> ClN <sub>2</sub> O <sub>6</sub> S <sub>2</sub>
<b>Molecular Weight:</b>	743.33
<b>Target:</b>	Fluorescent Dye
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

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

<b>Description</b>	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 <sup>[1]</sup> .
<b>In Vitro</b>	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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### CUSTOMER VALIDATION

- Advanced Therapeutics. 10 September 2022.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

### 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

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

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