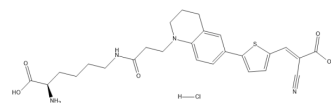


## Rf470DL

<b>Cat. No.:</b>	HY-D1689
<b>CAS No.:</b>	2758364-03-1
<b>Molecular Formula:</b>	C <sub>26</sub> H <sub>31</sub> ClN <sub>4</sub> O <sub>5</sub> S
<b>Molecular Weight:</b>	547.07
<b>Target:</b>	Bacterial
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Rf470DL is a rotor-fluorogenic D-amino acid (RfDAA). Rf470DL can be used for labeling bacteria (Ex=470 nm, Em=640 nm) <sup>[1]</sup> .
<b>In Vitro</b>	<p>Rf470DL can realize ash-free imaging of bacterial cell walls<sup>[1]</sup>.</p> <p>Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs)<sup>[1]</sup>.</p> <ol style="list-style-type: none"> <li>RfDAA/FDAA stock solutions are prepared in DMSO at a concentration of 100 mM and stored at -20°C before use.             <ol style="list-style-type: none"> <li>For long-pulse labeling of <i>B. subtilis</i> and <i>E. coli</i>, dilute the exponential phase cultures with fresh LB broth containing 1 mM Rf470DL to OD<sub>600</sub>~0.05, and incubate for 1 h.</li> <li>Image immediately using a Nikon Ti-E inverted microscopy system without washing and fixation.</li> </ol> </li> <li>For short-pulse labeling of <i>S. venezuelae</i>, Rf470DL stock solution is added directly to exponential phase cultures to a final concentration of 0.5 mM, followed by incubating at 30 °C with shaking for 15 min.             <ol style="list-style-type: none"> <li>Image immediately using a Nikon Ti-E inverted microscopy system without washing and fixation.</li> </ol> </li> </ol> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### REFERENCES

[1]. Yen-Pang Hsu, et al. Fluorogenic D-amino acids enable real-time monitoring of peptidoglycan biosynthesis and high-throughput transpeptidation assays. *Nat Chem.* 2019 Apr;11(4):335-341.

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

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