

- **Known Property** Bacterial amyloids probe
- **Application** Immunofluorescence
- **Cell selectivity mechanism:** POLD (Bacterial amyloids)

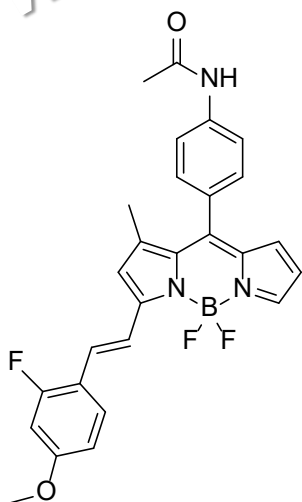
■ **General Use Guide**

More than 1/100 dilution of 10mM of DMSO stock solution is essential

For biomedical use to avoid DMSO concentration higher than 1%.

Working concentrations for specific applications should be determined by the investigator.

It is recommended to use up the buffer diluted solution within one day. The compound may be decomposed or precipitated out from buffer solution.



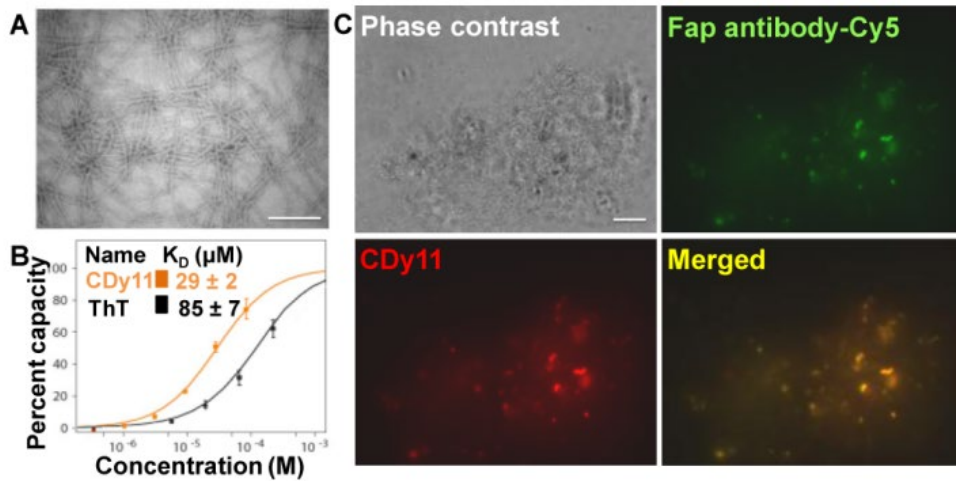
Molecular Weight

489.31 (C₂₇H₂₃BF₃N₃O₂)

$\lambda_{\text{ex}} / \lambda_{\text{em}}$

558 / 576 nm

Bacterial biofilm is a self-generated extracellular polymeric substance (EPS), composed of extracellular DNA, polysaccharides, and proteins such as amyloids. **CDy11** (Compound of Designation yellow 11) is discovered through a screening for bacteria with functional amyloids in *Pseudomonas aeruginosa* (Fap).



Evaluation of target of **CDy11**. (A) Transmission electron microscopic image of purified amyloid. Scale bar, 400 nm. (B) Surface plasma resonance assay with **CDy11** and purified amyloid after immobilization on chips. Values were calculated by measurements for their response unit by flowing ThT and **CDy11**. (C) Co-localization of **CDy11** and Fap antibody. Biofilms were incubated with primary Fap antibody and secondary antibody linked with Cy5. Subsequently, **CDy11** was treated for 1 h before acquiring images. The images were captured using a fluorescence microscope equipped with $\times 100$ objective lens. Scale bars, 10 μm . The images are shown in pseudocolors.

- Related probes: CDy14, CDr15

Reference

1. **Detection of pathogenic biofilms with bacterial amyloid targeting fluorescent probe, CDy11**, Kim, J. Y.; Sahu, S.; Yau, Y. H.; Wang, X.; Shochat, S. G.; Nielsen, P. H.; Dueholm, M. S.; Otzen, D. E.; Lee, J.; Delos Santos, M. M.; Yam, J. K.; Kang, N. Y.; Park, S. J.; Kwon, H.; Seviour, T. W.; Yang, L.; Givskov, M.; Chang, Y. T.* J. Am. Chem. Soc. 2016, 138, 402-407.
2. **A mouse ear skin model to study the dynamics of innate immune responses against Staphylococcus aureus biofilms**, Abdul Hamid, A. I.; Nakusi, L.; Givskov, M.; Chang, Y. T.; Marquès, C.; Gueirard, P. BMC Microbiol. 2020, 20:22.