BacGO
P029
1 μmol

■ **Known Property** gram positive bacteria probe

■ **Application** Immunofluorescence

■ **Cell selectivity mechanism:** COLD (peptidoglycan of bacteria))

■ **Storage** ① Delivery: Room Temperature

② Dried compound: 4 °C or -20 °C

③ Compound solution: 4 °C or -20 °C

■ ORDER

SenPro

order@senprobe.com

www.senprobe.com

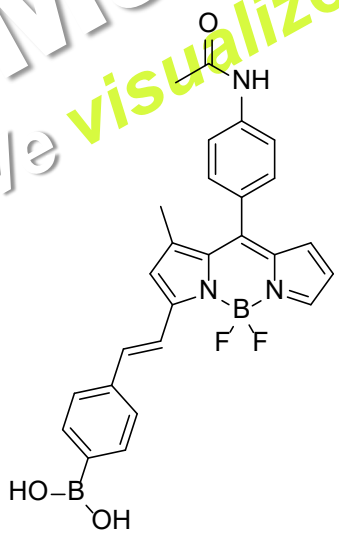
■ General Use Guide

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

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

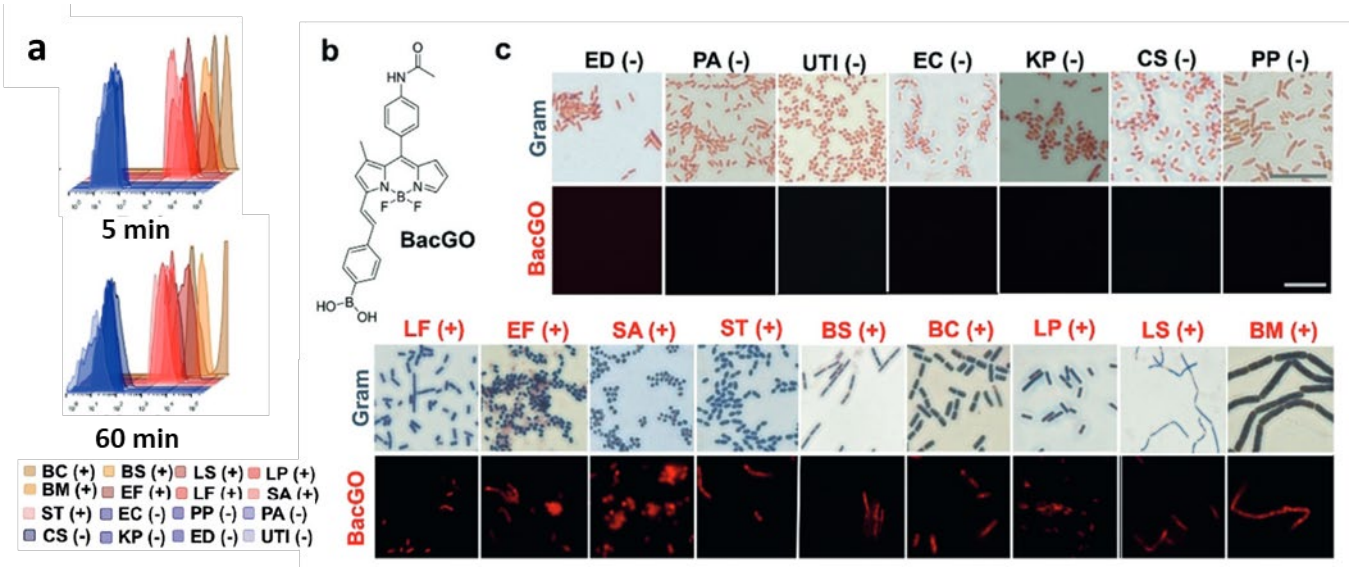
Working concentrations for specific applications should be determined by the investigator.

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	485.1 ($C_{26}H_{23}B_2F_2N_3O_3$)
λ_{ex} / λ_{em}	563 / 578 nm

BacGO (Bacteria Gram-positive Orange) is selective fluorescent probe for gram positive bacteria over gram negative bacteria. Boronic acid is a popular binding motif for vicinal diol and has been used for carbohydrate recognition. Gram positive bacteria contains higher contents of peptidoglycan than Gram negative bacteria and boronic acid is expected to more selectively bind to Gram positive bacteria. A series of boronic acid containing fluorescent compounds were tested for Gram positive bacteria selective staining, and **BacGO** was discovered as a universal Gram positive bacteria probe.



Universal selectivity of **BacGO** towards Gram-positive bacterialstrains. (a) BacGO was incubated with 16 bacteria strains for 5 or 60 min. Flow-cytometry histogram images of BacGO 1 μm staining. b) The structure of **BacGO**. (c) Images of Gram staining and fluorescent staining using 16 bacterial strains. The fluorescent image of **BacGO** (Texas-red filter) and Gram-staining images were taken using a Zeiss Microscope equipped with a 100 x objective lens. Scalebar = 10 μm. (BC, Bacilluscereus; BM, Bacillusmegaterium; BS, Bacillussubtilis; CS; Cronobactersakazakii; EC, Escherichiacoli; ED, Escherichiacoli DH5a; UTI, EscherichiacoliUTI89; EF, Enterococcusfaecalis; KP, Klebsiellapneumoniae; LF, Lactobacillusfermentum; LP, Lactobacillusplantarum; LS, Lactobacillussakei; PA, Pseudomonasaeruginosa; PP, Pseudomonasputida; SA, Staphylococcusaureus; ST, Streptococcusthermophilus).

- Related probes: CDy11, CDy14, CDr15

Reference

1. **Development of a Universal Fluorescent Probe for Gram-Positive Bacteria,** Kwon, H. Y.; Liu, X.; Choi, E. G.; Lee, J. Y.; Choi, S. Y.; Kim, J. Y.; Wang, L.; Park, S. J.; Kim, B.; Lee, Y. A.; Kim, J. J.; Kang, N. Y.*; Chang, Y. T.* Angew. Chem. Int. Ed. Engl. 2019, 58, 8426-8431.