CDb8
P008
1 μmol

■ **Known Property** mouse embryonic stem cell (mES) probe

■ **Application** Immunofluorescence

■ **Cell selectivity mechanism**: COLD (maybe glycogen)

■ **Storage** ① Delivery: Room Temperature

② Dried compound: 4 °C or -20 °C

③ Compound solution: 4 °C or -20 °C

■ ORDER

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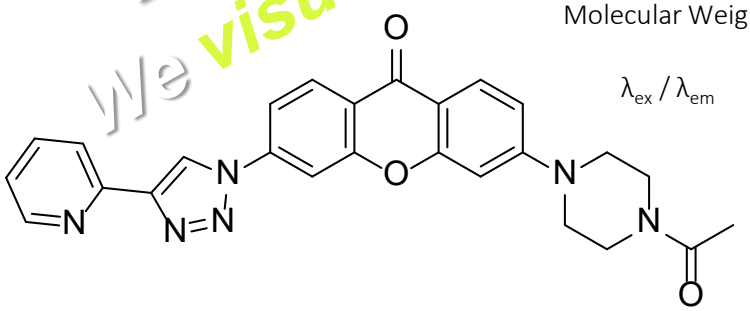
■ General Use Guide

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.

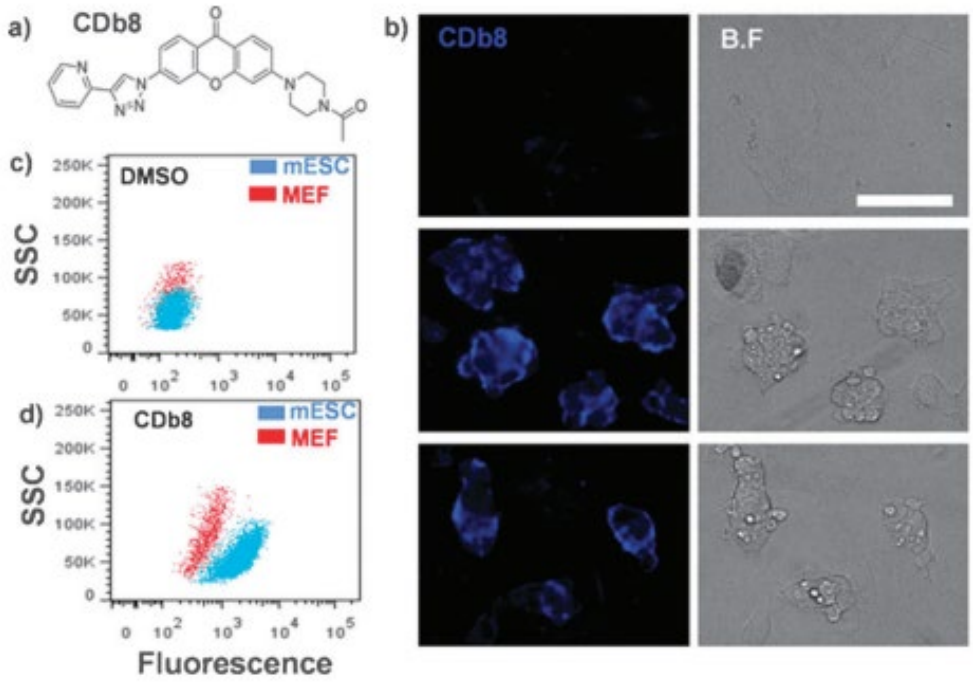
It is recommended to use up the buffer diluted solution within one day. The compound may be decomposed or precipitated out from buffer solution.



Molecular Weight 466.50 ($C_{26}H_{22}N_6O_3$)

λ_{ex} / λ_{em} 365 / 495 nm

CDb8 (Compound of Designation blue 8) is a xanthone based blue fluorescent probe for mouse embryonic stem cell (mES). **CDb8** stains the outside of mES colony, i.e. glycocalyx area [1]. Glycocalyx is enriched with glycoproteins and glycolipids. The co-staining with related ES probes showed that CDy1 stains inside ES colony, and CDg4 and **CDb8** stains the surface of ES colony [2]. Based on the imaging data, the binding target of **CDb8** may be glycogen in glycocalyx.



Selective staining of mESC by **CDb8.** (a) Chemical structure of CDb8; (b) mESC was selectively stained by **CDb8** at 1 μM for 1 h. Upper panel: mouse embryonic fibroblasts (MEF), middle: mouse embryonic stem cells (mESC), lower panel: mESC on MEF feeder. (c) Flow cytometry analysis of DMSO control cells. (d) Flow cytometry analysis of **CDb8** stained cells. The cells are loaded after 1 h incubation at 1 μM. B.F: bright field, scale bar: 100 μm.

- Related probes: CDy1, CDg4, CDy9

Reference

1. **Solid phase combinatorial synthesis of xanthone library using click chemistry and its application to embryonic stem cell probe,** Ghosh, K. K; Ha, H. H.; Kang, N. Y.; Chandran, Y.; Chang, Y. T.* Chem. Commun. 2011, 47, 7488-7490
2. **Development of fluorescent Chalcone library and its application in the discovery of a mouse embryonic stem cell probe**, Lee, S. C.; Kang, N. Y.; Park, S. J.; Yun, S. W.; Chandran, Y.; Chang, Y. T.* Chem. Commun. 2012, 48, 6681-6683.