CDg4
P004
1 μmol

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

■ **Application** Immunofluorescence

■ **Cell selectivity mechanism**: COLD (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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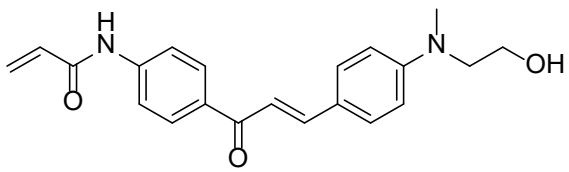
■ General Use Guide

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

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

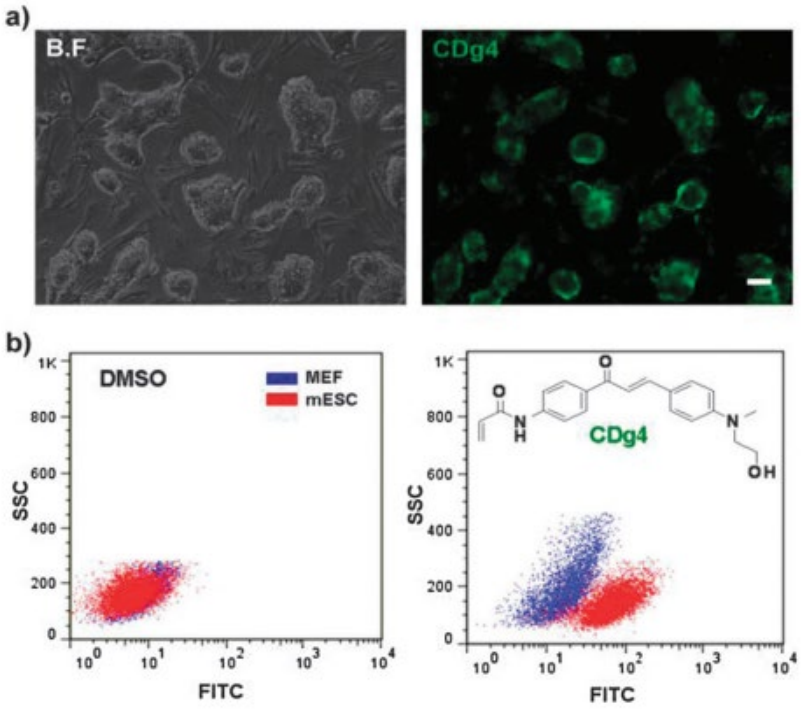
Working concentrations for specific applications should be determined by the investigator.

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	350.42 ($C_{21}H_{22}N_2O_3$)
λ_{ex} / λ_{em}	430 / 560nm

CDg4 (Compound of Designation green 4) is a chalcone based green fluorescent probe for mouse embryonic stem cell (mES). **CDg4** stains the outside of mES colony, i.e. glycocalyx area. Glycocalyx is enriched with glycoproteins and glycolipids. The binding target of Cdg4 was identified as glycogen in glycocalyx, and the **CDg4** staining was diminished by amylase treatnebt. In contrast to mES colony, neurosphere lacks glycogen and is not stained by **CDg4.** The co-staining with related ES probes showed that CDy1 stains inside ES colony, and **CDg4** and CDb8 stains the surface of ES colony



(a) The mESCs were co-cultured on MEF. The bright field (left) and fluorescent image (right) of **CDg4**. Scale bar: 200 μm. Images of stained cell colonies were taken by 4 objective lenses. (b) Flow cytometry dot plot images of mESC and MEF stained with DMSO as a control and **CDg4** (λab: 430 nm, λem: 560 nm, e: 23 600, QY: 0.2 in DMSO).

- Related probes: CDy1, CDb8, CDy9

Reference

1. **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.