

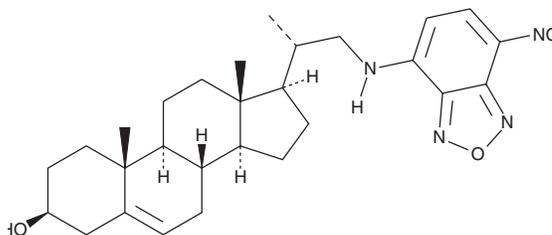
PRODUCT INFORMATION



22-NBD Cholesterol

Item No. 30136

CAS Registry No.: 78949-95-8
Formal Name: 20S-methyl-21-[(7-nitro-2,1,3β-benzoxadiazol-4-yl)amino]-pregn-5-en-3-ol
MF: C₂₈H₃₈N₄O₄
FW: 494.6
Purity: ≥90%
Ex./Em. Max: 472/540 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

22-NBD cholesterol is supplied as a solid. A stock solution may be made by dissolving the 22-NBD cholesterol in the solvent of choice, which should be purged with an inert gas. 22-NBD cholesterol is soluble in the organic solvent methanol at a concentration of approximately 1 mg/ml.

Description

22-NBD cholesterol is a fluorescent analog of cholesterol (Item No. 9003100) that contains a fluorescent nitrobenzoxadiazole (NBD) group.¹ It has been used in a variety of *in vitro* and *in vivo* applications, including analysis of steroid uptake and esterification, intracellular localization and targeting, and metabolism in mammalian and bacterial cells, and intestinal absorption of cholesterol in hamsters.²⁻⁴ 22-NBD cholesterol displays excitation/emission maxima of 472/540 nm, respectively, when incorporated into 1,2-dimyristoyl-*sn*-glycero-3-PC (DMPC; Item No. 15097) vesicles.⁵ The emission maximum of 22-NBD cholesterol is solvent-dependent and increases as solvent polarity increases.¹

References

1. Craig, I.F., Via, D.P., Mantulin, W.W., *et al.* Low density lipoproteins reconstituted with steroids containing the nitrobenzoxadiazole fluorophore. *J. Lipid Res.* **22**(4), 687-696 (1981).
2. Faletrov, Y., Brzostek, A., Plocinska, R., *et al.* Uptake and metabolism of fluorescent steroids by mycobacterial cells. *Steroids* **117**, 29-37 (2017).
3. Frolov, A., Petrescu, A., Atshaves, B.P., *et al.* High density lipoprotein-mediated cholesterol uptake and targeting to lipid droplets in intact L-cell fibroblasts. A single- and multiphoton fluorescence approach. *J. Biol. Chem.* **275**(17), 12769-12780 (2000).
4. Sparrow, C.P., Patel, S., Baffic, J., *et al.* A fluorescent cholesterol analog traces cholesterol absorption in hamsters and is esterified in vivo and in vitro. *J. Lipid Res.* **40**(10), 1747-1757 (1999).
5. Ostašov, P., Sýkora, J., Brejchová, J., *et al.* FLIM studies of 22- and 25-NBD-cholesterol in living HEK293 cells: Plasma membrane change induced by cholesterol depletion. *Chem. Phys. Lipids* **167-168**, 62-69 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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