PRODUCT INFORMATION

3-dodecanoyl-NBD Cholesterol
Item No. 13220

CAS Registry No.: 1246303-05-8
Formal Name: 12-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]-3-methoxy-10,13-dimethyl-17-((R)-6-methylheptan-2-yl)-tetradecahydro-1H-cyclopenta[a]phenanthrene
Synonym: 3-C12-NBD Cholesterol
MF: C_{45}H_{70}N_{4}O_{5}
FW: 747.1
Purity: ≥98%
UV/Vis.: \( \lambda_{\text{max}} \): 229, 335, 465 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year

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

Laboratory Procedures

3-dodecanoyl-NBD cholesterol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 3-dodecanoyl-NBD cholesterol is approximately 1 mg/ml in DMF and approximately 0.25 mg/ml in DMSO.

Description

C-12 NBD cholesterol is a fluorescently tagged cholesterol with the hydrophilic NBD fluorophore attached to the hydrophilic end of cholesterol, separated by a 12-carbon spacer. This design allows the cholesterol to properly orient in membrane bilayers while the fluorescent tag is presented outside of the bilayer. This should model the behavior of cholesterol in membranes better than the previously used 25-NBD cholesterol, which positions NBD directly on the 25th carbon of cholesterol at the hydrophobic terminus. NBD has excitation/emission maxima of 465/535 nm, respectively. Fluorescently tagged lipids have been used to study their interactions with proteins, their utilization by cells and liposomes, and for the development of assays for lipid metabolism.\(^1\)-\(^5\)

References