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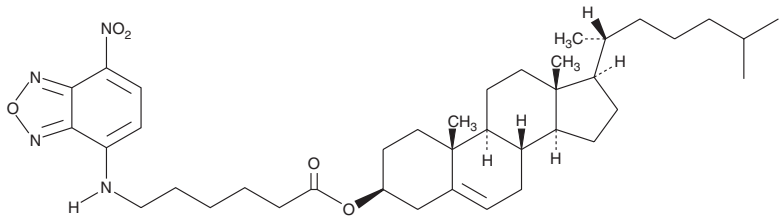
PRODUCT INFORMATION

3-hexanoyl-NBD Cholesterol

Item No. 13221

CAS Registry No.:	201731-19-3
Formal Name:	6-[(7-nitro-2,1,3-benzoxadial-4-yl)amino]-cholest-5-en-3-ol
Synonym:	3-C_6-NBD Cholesterol
MF:	$C_{39}H_{58}N_4O_5$
FW:	662.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 332, 465 nm
Ex./Em. Max:	473/536 nm
Supplied as:	A crystalline solid
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-hexanoyl-NBD cholesterol is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-hexanoyl-NBD cholesterol in the solvent of choice, which should be purged with an inert gas. 3-hexanoyl-NBD cholesterol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 3-hexanoyl-NBD cholesterol is approximately 1 mg/ml in ethanol and DMF and approximately 0.25 mg/ml in DMSO.

Description

3-hexanoyl-NBD cholesterol is a fluorescently tagged cholesterol derivative with the hydrophilic NBD fluorophore attached to carbon 3, at the hydrophilic end of cholesterol, separated by a 6-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. 3-hexanoyl-NBD cholesterol has excitation/emission maxima of 473/536 nm, respectively, in vesicles comprised of dioleolylphosphatidylcholine (DOPC), however, the maxima will vary depending on membrane composition.[1] 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.[2-6]

References

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