Product Information

3-dodecanoyl-NBD Cholesterol
Item No. 13220

CAS Registry No.: 1246303-05-8
Formal Name: 12-[(7-nitro-2,1,3-benoxadiazol-4-yl)amino]-3S,10R,13R-3-methoxy-10,13-dimethyl-17-[(R)-6-methylheptan-2-yl]-tetradechydro-1H-cyclopenta[α]phenanthrene
Synonym: 3-C12-NBD Cholesterol
MF: C45H70N4O5
FW: 747.1
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol
UV/Vis.: λmax: 229, 335, 465 nm

Laboratory Procedures
For long term storage, we suggest that 3-dodecanoyl-NBD cholesterol be stored as supplied at -20°C. It should be stable for at least one year.

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 in DMSO is approximately 0.25 mg/ml and approximately 1 mg/ml in DMF.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

3-dodecanoyl-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 bi-layers while the fluorescent tag is presented outside of the bi-layer. 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. 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

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/13220

WARNING: This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your institution.

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