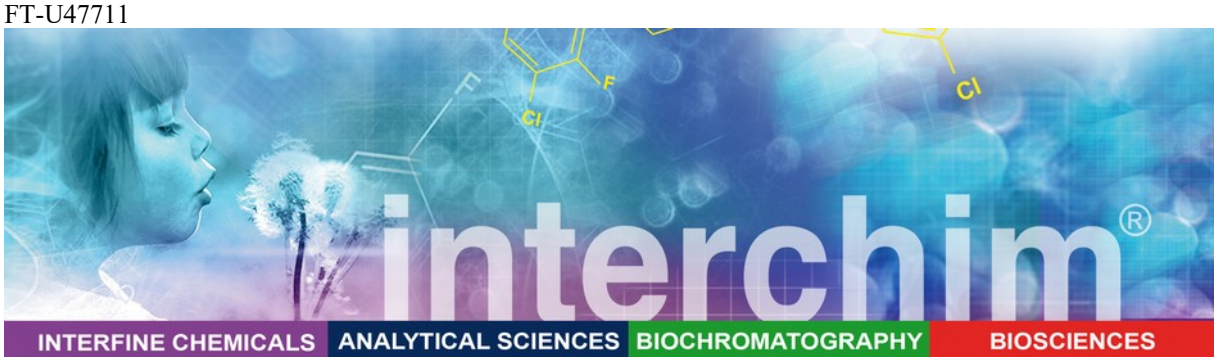
FluoProbes®

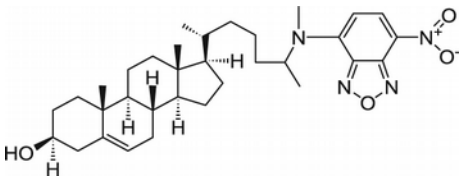
FT-U47711



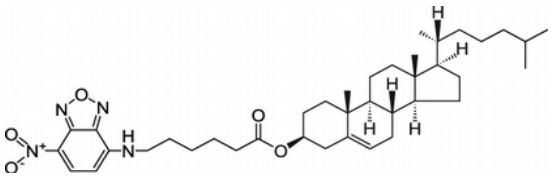
Fluorescent Cholesterol

Products Information

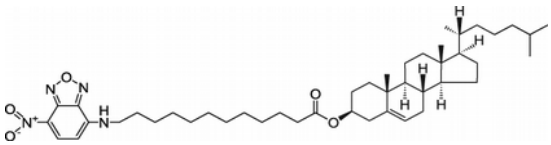
Name :	**25-NBD Cholesterol** 25-[N-[(7-nitro-2-1,3-benzoxadiazol-4-yl)methyl]amino]-27-norcholesterol
	CAS [105539-27-3]
Catalog Number :	**FP-U4771A**, 1mg
Molecular Weight :	**564.75**,
Solubility:	Ethanol >99%pur



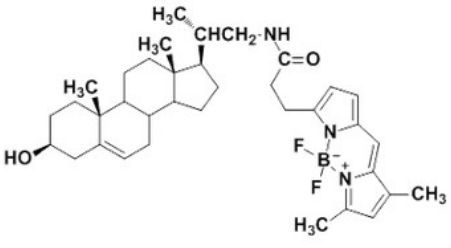
Name :	**3-NBD-C6 Cholesterol** 5-cholesten-3ß-ol 6-[(7-nitro-2-1,3-benzoxadiazol-4-yl)amino]caproate
	CAS [201731-19-3]
Catalog Number :	**FP-1H2141**, 1mg
Molecular Weight :	MW=**662.90**
Solubility:	Ethanol >99%pur



Name :	**3-NBD-C12 Cholesterol** 3-dodecanoyl-NBD Cholesterol; 3-C12-NBD Cholesterol conjugate 5-cholesten-3ß-ol 12-[(7-nitro-2-1,3-benzoxadiazol-4-yl)amino]dodecanoate ; 12-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]-(3S,10R,13R)-3-methoxy-10,13-dimethyl-17-((R)-6-methylheptan-2-yl)-tetradecahydro-1H-cyclopenta[α]phenanthrene
	CAS [1246303-05-8]
Catalog Number :	**FP-AYJ651**, 1mg
Molecular Weight :	MW=**747.06**
Solubility:	Ethanol >99%pur
	Exc/Em.= 464/512 to 497/551nm



Name :	**Cholesterol – BrDIPY FL** 5,5-difluoro-7-(3-((2-((3S,10R,13S,17R)-3-hydroxy-10,13-dimethyl-2,3,4,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1H-cyclopenta[a]phenanthren-17-yl)propyl)amino)-3-oxopropyl)-1,3-dimethyl-5H-dipyrrolo[1,2-c:2',1'-f][1,3,2]diazaborinin-4-ium-5-uide
Catalog Number :	**FP-05619A**, 1mg
Molecular Weight :	MW=605.6
Solubility:	DMSO, DMF, Acetonitrile and Chloroform
	Exc/Em.= 500/ 506, EC: 88 000



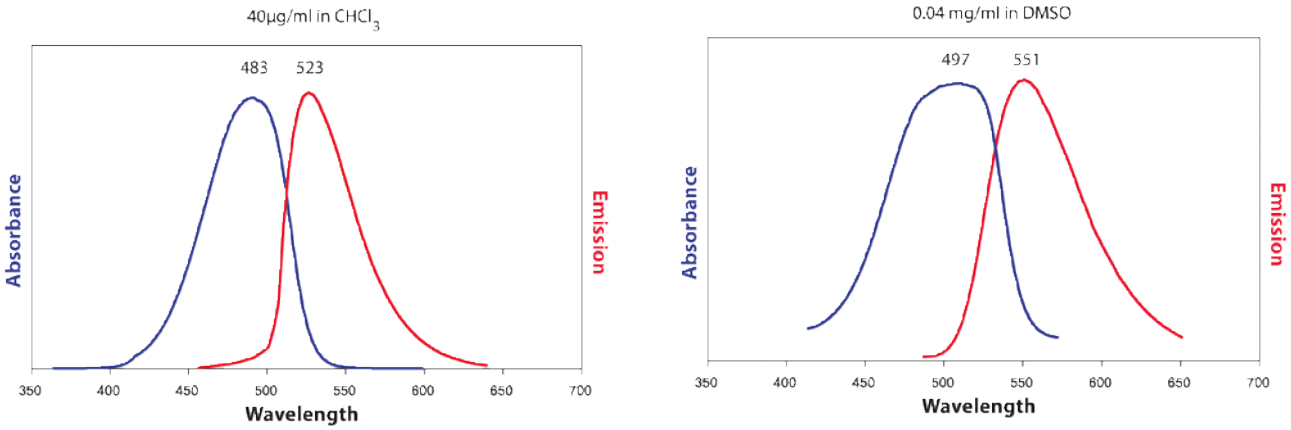
Storage: –20°C Protect from light and moisture

Technical information

25-NBD Cholesterol closely resembles the structure of native cholesterol. It incorporates into membranes and more effectively probes cholesterol containing domains, an obvious advantage over short-chain analogues.

NBD-C6-3-Cholesterol and **NBD-C12-3-Cholesterol** are fluorescently-tagged cholesterol with the hydrophilic NBD fluorophore attached to the hydrophilic end of cholesterol, separated by a 6- and 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. 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.

NBD fluorescent spectra



BDP fluorescence

The **BDP dye** is based on the 4,4-Difluoro-4-bora-3a,4a-diaza-s-indacene (or **DIP**Yrromethene**B**Oron difluoride) core. This dye fluoresce with max Exc/Em.= 500/ 506, is stable in physiological conditions, is relatively insensitive to variations in pH, and generally have high quantum yields and sharp emission peaks.

3-NBD Cholesterol technical info

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. We do not recommend storing the aqueous solution for more than one day.

Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations.

References

1. Kumagai, K., Yasuda, S., Okemoto, K., et al . CERT mediates intermembrane transfer of various molecular species of ceramides. J. Biol. Chem . 280(8) , 6488-6495 (2005).
2. Luo, M., Jones, S.M., Peters-Golden, M., et al . Nuclear localization of 5-lipoxygenase as a determinant of leukotriene B 4 synthetic capacity. Proc. Natl. Acad. Sci. USA 100(21) , 12165-12170 (2003).
3. Moreno, M.J., Estronca, L.M.B.B., and Vaz, W.L.C. Translocation of phospholipids and dithionite permeability in liquid-ordered and liquid-disordered membranes. Biophys. J . 91 , 873-881 (2006).
4. Loidl, A., Claus, R., Deigner, H.P., et al . High-precision fluorescence assay for sphingomyelinase activity of isolated enzymes and cell lysates. J. Lipid Res . 43 , 815-823 (2002).
5. Tani, M., Okino, N., Mitsutake, S., et al . Specific and sensitive assay for alkaline and neutral ceramidases involving C12-NBD-ceramide. J. Biochem . 125 , 746-749 (1999).

Related products

ROS Probes, i.e.
Dihydrorhodamine 123, FP-83775A),

H2DCFDA (FP-467312)
Fluorescent Phalloidin (cytoskeleton probes) AZ0330

Ordering information

Catalog size quantities and prices may be found at http://www.fluoprobes.com
Please inquire for higher quantities (availability, shipment conditions).

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