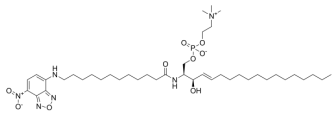
C12 NBD Sphingomyelin

Cat. No.:	HY-D1584
CAS No.:	254117-01-6
Molecular Formula:	$C_{41}H_{73}N_6O_9P$
Molecular Weight:	825.03
Target:	Phospholipase
Pathway:	Metabolic Enzyme/Protease
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



BIOLOGICAL ACTIVITY

Description	C12 NBD sphingomyelin is an active derivative of sphingomyelin (HY-113498) that is tagged with fluorescent C12 nitrobenzoxadiazole (C12 NBD). C12 NBD sphingomyelin can be used as a sphingomyelinase substrate for studying the metabolism and transport of sphingomyelins (Ex=470 nm, Em=525 nm)[1].
IC_{50} & Target	Sphingomyelinase[1]
In Vitro	Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs)[1]. Assay for Sphingolipid-Degrading Enzymes (EGCase Ⅱ, SCDase and SMase): 1. Incubate amounts of enzymes with 0.1 nM dye at 37 ℃ for indicated times under following conditions. (1). 10 mM sodium acetate buffer (pH5.0) containing 0.2% Triton X-100 for EGCase. (2) 25 mM sodium phosphate buffer (pH 6.0) containing 0.1% Triton X-100 for SCDase. (3) 25 mM sodium phosphate buffer (pH 7.0) containing 0.2% Triton X-100 for SMase. 2. After incubation, the solvent is evaporated and the residue is dried, dissolved in 10 μL of chloroform/methanol (2:1) and analyzed by TLC using chloroform/methanol/0.02% $CaCl_2$ (5:4:1, v/v) as the developing solvent. 3. Degradation products and remaining substrates are separated by TLC and quantified with a chromatoscanner (excitation 470 nm, emission 525 nm) for fluorescence-labeled substrates. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Nakagawa, et al. Preparation of fluorescence-labeled GM1 and sphingomyelin by the reverse hydrolysis reaction of sphingolipid ceramide N-deacylase as substrates for assay of sphingolipid-degrading enzymes and for detection of sphingolipid-binding proteins. J. Biochem. 126(3), 601-611 (1999).

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