



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

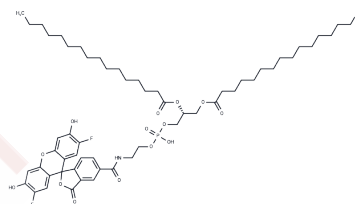
www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

FG 488 DHPE

Chemical Properties

CAS No. :	438476-80-3
Formula:	C ₅₈ H ₈₂ F ₂ N ₂ O ₁₄ P
Molecular Weight:	1086.24
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	FG 488 DHPE, a lipid-coupled fluorochrome, is used as the fluorophore Oregon Green 488. It monitors the acidification of lipid vesicles with $\lambda_{ex}/\lambda_{em}=508/534$ nm and is also utilized for quantifying Hv1-induced proton translocation with the same excitation/emission wavelengths [1] [2].
In vitro	FG 488 DHPE exhibits pH-dependent fluorescence emission characteristics [1]. Monitoring acidification in Bulk vesicle assays [1]: 1. Instrument: Jasco FP6500 spectrofluorometer, 37 °C; excitation at $\lambda_{ex}=508$ nm and emission detection at $\lambda_{em}=534$ nm. 2. Add 100 μL proteoliposomes (cphospholipid ~60 μM) to 680 μL ATPase buffer with K⁺-ionophore valinomycin (5 nM) for charge equilibration. 3. Add ATP (1.2 mM) to induce proton pumping. 4. Add 1 mM NaN₃ to halt ATP hydrolysis. 5. Add CCCP (carbonyl cyanide 3-chlorophenyl hydrazine, 0.4 μM) to deplete the proton gradient. Conversion into pH-values normalizes fluorescence intensities to those obtained directly after ATP addition. FG 488 DHPE quantifies pH changes induced by the voltage-dependent proton channel Hv1 [2]. Quantification of phospholipid concentrations [2]: 1. Add Perchloric acid (70%, 200 μL) to a sample of unilamellar vesicles containing OG488-DHPE (30 μL). 2. Heat at 220 °C for 60 min to generate inorganic phosphate. 3. Cool to room temperature and add 700 μL of NH₄MoO₄ (0.45% (w/v)), perchloric acid (12.6% (w/v)), and 700 μL acetic acid (1.7% (w/v)). 4. Obtain a calibration curve for NaH₂PO₄ concentrations. 5. Incubate samples at 80 °C for 10 min and measure absorption at 820 nm. 6. Calculate phospholipid concentrations using the calibration curve. Proton translocation assay [2]: 1. Instrument: Jasco FP6500 spectrofluorometer, 37 °C; excitation at $\lambda_{ex}=508$ nm (3 nm band width) and emission detection at $\lambda_{em}=534$ nm (3 nm band width). 2. Dilute proteoliposomes (POPC/POPG/Chol/OG488-DHPE in 54.5:25:20:0.5 ratio) in buffer A within flux buffer, creating a 14-fold K⁺-gradient across the membrane. 3. Add valinomycin (13 nM) to induce protonation of OG488-DHPE and quench its fluorescence intensity for active Hv1 channels. 4. Add CCCP (6 nM) to permeabilize vesicles for protons. 5. Plot normalized fluorescence intensity F_{norm} as a function of time. Use protein-free vesicles as a control for proton leakage. For experiments with the potential inhibitor 2GBI, dissolve the inhibitor (15 mM) in flux buffer and add (0.5-8.0 μL) to proteoliposomes before valinomycin addition to induce proton translocation.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9206 mL	4.603 mL	9.2061 mL
5 mM	0.1841 mL	0.9206 mL	1.8412 mL
10 mM	0.0921 mL	0.4603 mL	0.9206 mL
50 mM	0.0184 mL	0.0921 mL	0.1841 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481