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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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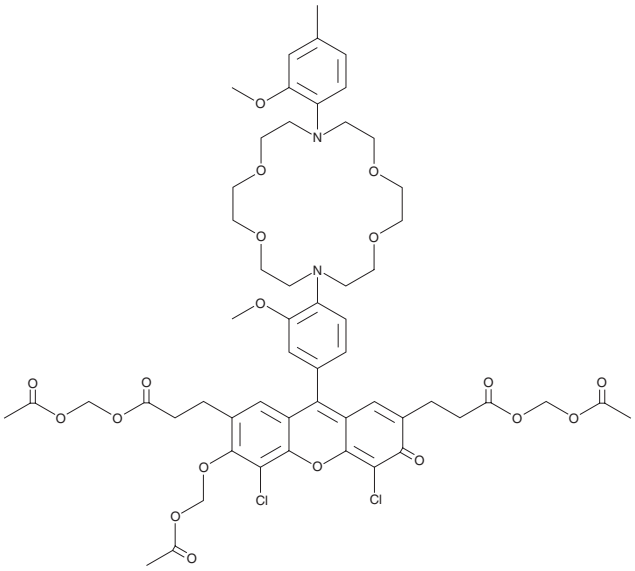
PRODUCT INFORMATION

IPG-2 AM

Item No. 35540

CAS Registry No.: 1369302-24-8
Formal Name: 6-[(acetyloxy)methoxy]-4,5-dichloro-9-[3-methoxy-4-[16-(2-methoxy-4-methylphenyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadec-7-yl]phenyl]-3-oxo-3H-xanthene-2,7-dipropanoic acid, 2,7-*bis*[(acetyloxy)methyl] ester
Synonyms: APG-2 Acetoxymethyl ester, APG-2 AM, Asante Potassium Green-2 Acetoxymethyl ester, Asante Potassium Green-2 AM, ION Potassium Green-2 Acetoxymethyl ester, ION Potassium Green-2 AM, IPG-2 Acetoxymethyl ester
MF: $C_{55}H_{64}Cl_2N_2O_{19}$
FW: 1,128.0
Purity: ≥90%
Ex./Em. Max: 525/545 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Protect from light and moisture



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

IPG-2 AM is a cell-permeable fluorescent potassium indicator. It binds to potassium (K_d = 18 mM) and displays excitation/emission maxima of 525/545 nm, respectively. IPG-2 AM has been used to kinetically monitor potassium levels in isolated human platelets *via* flow cytometry.[1] IPG-2 is also available in a cell-impermeable form (Item No. 35533).

Assay Protocol

Note: Allow all reagents to warm to room temperature before proceeding.

1. Add 10 ml of assay buffer to a 15 or 50 ml conical tube.

Note 1: HEPES-buffered Hank's balanced salt solution (HBSS), pH 7.2-7.4, is recommended, although other buffers can be used.

2. Add 100 µl of a 100X Pluronic™ F-127 solution (1-50% w/v) to the conical tube*. Pluronic™ F-127 is a biocompatible surfactant used to ensure equitable dye distribution and cellular loading.
    a. Optional: Add 100 µl of 2 mM probenecid stock solution to the conical tube. Probenecid (Item No. 14981) is an anion transport inhibitor used to improve intracellular dye retention. Use of probenecid is recommended, but not required, for all cell types and dyes.

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**Final working concentration of Pluronic™ F-127 should be between 0.01 and 0.5% w/v. User should optimize the concentration of Pluronic™ F-127 to suit experimental requirements.*

Note 2: Probenecid is an inhibitor or agonist of multiple ion channels and may have undesirable cellular effects that could affect dye performance.

3. Vortex conical tube briefly to mix.
4. Dissolve IPG-2 AM in 25 µl of DMSO and vortex dye tube briefly to mix.
5. Centrifuge dye tube briefly to collect all contents at the tube bottom.
6. Add entire contents of dye tube to the conical tube containing the assay buffer solution to make the dye loading solution.
7. Vortex conical tube briefly to mix.

Note 3: The dye loading solution should be used within two hours for best results.

8. Remove cell culture medium and add dye loading solution. Recommended volumes are:
    a. 35 mm dish or 6-well plate: 1.5 ml/dish or well
    b. 96-well plate: 100 µl/well
    c. 384-well plate: 20 µl/well

Note 4: To prevent cell detachment or if using suspension cells, the dye loading solution can be added directly to the media-containing wells. User must double the component concentrations to achieve the same final concentration of all reagents.

9. Incubate cells with the dye loading solution at 37°C for 60 minutes.
10. Read fluorescence using a plate reader at excitation and emission wavelengths of 525 and 545 nm, respectively.
    Or
    Image using a fluorescence microscope with filters for YFP, GFP, or fluorescein.

Reference

1. Aliotta, A., Calderara, D.B., and Alberio, L. Flow cytometric monitoring of dynamic cytosolic calcium, sodium, and potassium fluxes following platelet activation. *Cytometry A.* **97(9)**, 933-944 (2020).

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