

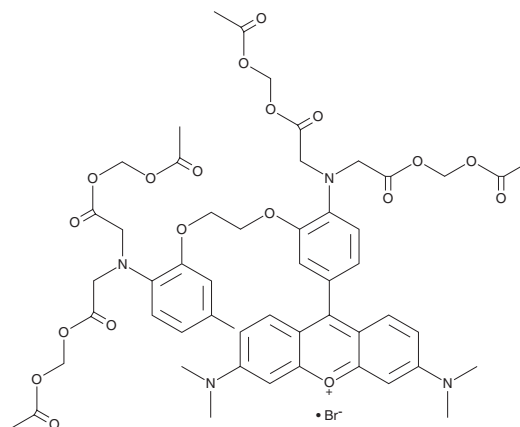
PRODUCT INFORMATION



Rhod-2 AM

Item No. 19355

CAS Registry No.: 145037-81-6
Formal Name: 9-[4-[bis[2-[(acetyloxy)methoxy]-2-oxoethyl]amino]-3-[2-[2-[bis[2-[(acetyloxy)methoxy]-2-oxoethyl]amino]phenoxy]ethoxy]phenyl]-3,6-bis(dimethylamino)-xanthylum, monobromide
Synonym: Rhod-2 Acetoxymethyl ester
MF: C₅₂H₅₉N₄O₁₉ • Br
FW: 1,124.0
Purity: ≥93%
UV/Vis.: λ_{max}: 215, 255, 549 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Rhod-2 AM is supplied as a solid. A stock solution may be made by dissolving the rhod-2 AM in the solvent of choice, which should be purged with an inert gas. Rhod-2 AM is soluble in the organic solvent DMSO.

Description

Rhod-2 AM is an acetoxymethyl (AM) ester of the red fluorescent calcium indicator rhod-2. The AM group facilitates cellular uptake and is removed by cytoplasmic esterases, resulting in intracellular accumulation of rhod-2.¹⁻³ Rhod-2 AM selectively accumulates within mitochondria and, as a result, is commonly used to monitor calcium changes within this organelle.⁴⁻⁶ Excitation and emission maxima are 557 and 581 nm, respectively.³

References

1. Minta, A., Kao, J.P., and Tsien, R.Y. Fluorescent indicators for cytosolic calcium based on rhodamine and fluorescein chromophores. *J. Biol. Chem.* **264**(14), 8171-8178 (1989).
2. Jean-Quartier, C., Bondarenko, A.I., Alam, M.R., *et al.* Studying mitochondrial Ca²⁺ uptake - a revisit. *Mol. Cell. Endocrinol.* **353**(1-2), 114-127 (2012).
3. Paredes, R.M., Etzler, J.C., Watts, L.T., *et al.* Chemical calcium indicators. *Methods* **46**(3), 143-151 (2008).
4. Wang, S., Chen, J., and Valderribano, M. Nutrient restriction preserves calcium cycling and mitochondrial function in cardiac myocytes during ischemia and reperfusion. *Cell Calcium* **51**(6), 445-451 (2012).
5. Bodnır, D., Geyer, N., Ruzsnavszky, O., *et al.* Hypermuscular mice with mutation in the myostatin gene display altered calcium signalling. *J. Physiol.* **592**(6), 1353-1365 (2014).
6. Elamin, E., Masclee, A., Troost, F., *et al.* Cytotoxicity and metabolic stress induced by acetaldehyde in human intestinal LS174T goblet-like cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* **307**(3), G286-G294 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/13/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM