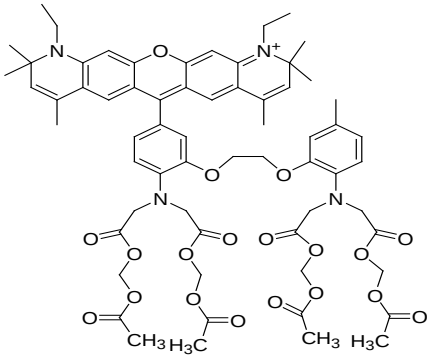
46117 Landing Parkway, Fremont, CA 94538 U.S.A.
Tel: 1-510-265-1027; Fax: 1-510-265-1352
www.biotium.com

PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: **Rhod-590, AM ester**

CATALOG NO. **50025**

MOLECULAR INFORMATION: $C_{64}H_{75}N_4O_{19}$
Mwt: 1204



PROPERTIES:

Color & Form	Purple solids
Solubility	Soluble in DMSO & water (pH >6)
Absorption/Emission	590nm/616nm (low [Ca^{2+}]) 595nm/626nm (high [Ca^{2+}])
Kd	0.61μM

STORAGE AND HANDLING: Stored desiccated at -20 °C upon receipt. Protect from light, especially when in solution.

APPLICATION: Rhod-590 has absorption (595 nm) and emission (616 nm) maxima that are longer than those of fluo-3. The longer absorption and emission wavelengths of rhod-590 may make it useful for some applications where autofluorescence is a problem, or where another fluorescent dye of shorter wavelengths is used at the same time. The fluorescent enhancement for rhod-590 from low [Ca^{2+}] to high [Ca^{2+}] was smaller than that for fluo-3, and also in general rhod-590 is somewhat less fluorescent than fluo-3.

Rhod-590 AM ester is membrane-permeant form and thus can be loaded into cells via incubation. Because of the relatively low water solubility of the AM ester, Pluronic F-127 (See **59000** and refs. therein), a mild detergent, is often used as a dispersing agent to facilitate the loading. Rhod-590/AM itself does not bind Ca^{2+}, but it is readily hydrolyzed to rhod-590 by endogenous esterases once the dye is inside the cells.

Biotium offers A-23187(**59001**), an ionophore that is commonly used for intracellular calibration of calcium indicators. Biotium also offers EDC (**59002,** also known as EDAC), which can be used to fix calcium indicators in cells, if post histochemical studies are desired following physiological experiments.

TOXICITY: Unknown

FIRST AID: Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing,

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move individual to fresh air and seek medical advice immediately.

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