

PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: SGC3

CATALOG #: 70056

MOLECULAR INFORMATION: C₂₉H₄₃Br₂N₃O₂
MW: 625

PROPERTIES:

Color & Form Dark orange solid
Solubility Soluble in DMSO or DMF
Absorption/Emission 484/563 nm (in MeOH)
Extinction Coefficient ≈ 58,000

Store desiccated at ≤ 4 °C. Protect from light, especially in solution.

STORAGE AND HANDLING:

SGC3 is a coumarin styryl dye that binds to membranes in a manner similar to the FM dyes. It becomes highly fluorescent upon insertion into lipid bilayers.

References:

Wu, et al., Biophysical Characterization of Styryl Dye-Membrane Interactions, Biophysical Journal, 97, 101-109, 2009.

Biotium has the largest collection of high quality nerve terminal dyes available to you at a fraction of the prices of our competitor's products. A comprehensive list of nerve terminal dyes are shown in Table 1.

*FM is a trademark of Molecular Probes, Inc.

Table 1. Related Nerve Terminal Probes

Cat. #	Product Name	Equivalent FM™ dye	$\lambda_{\text{abs}}/\lambda_{\text{em}}$ (nm, in MeOH) ^a	$\lambda_{\text{abs}}/\lambda_{\text{em}}$ (nm, in membranes)	Fixability
70024	AM1-43	none	510/625	479/598	Yes
70036	AM2-10	none	502/625	d	Yes
70042, 70043	SynaptoGreen C1	none	510/625	d	No
70044, 70045	SynaptoGreen C2	FM2-10	505/620	d	No
70023, 70026	SynaptoGreen C3	none	510/625	d	No
70020, 70022	SynaptoGreen C4	FM1-43	510/625	479/598	No
70046, 70047	SynaptoGreen C5	FM1-84	510/625	d	No
70040, 70041	SynaptoRed C1	none	543/b	c	No
70021, 70027	SynaptoRed C2	FM4-64	543/b	c	No

^a The spectra of styryl dyes are known to undergo a large blue shift (30 to 40 nm) when going from polar media (MeOH) to nonpolar media (membranes). ^b AM4-64, SynaptoRed C1 and SynaptoRed C2 have similar absorption spectra and their emission spectra are too weak to measure in MeOH. ^c Data have not been determined yet. However, excitation/emission wavelength setting at 515/640 nm has been used for detection of yeast vacuole membrane staining with SynaptoRed C2 (FM4-64) [J. Cell. Biol. 128, 779(1995)], and this setting should also be applicable to SynaptoRed C1. ^d Data are not available, but expected to be similar to that for AM1-43 or SynaptoGreen C4.

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, move individual to fresh air and seek medical advice immediately.
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