



Glowing products for science

SynaptoRed™ C2 (Equivalent to FM®4-64)

A widely used red fluorescent dye for following synaptic activity by staining synaptic vesicles at the synapse or neuromuscular junctions. When used in combination with the green fluorescent dye SynaptoGreen™ ([70020](#)), synapses or neuromuscular junctions can be imaged independently in two colors. SynaptoRed™ has also been used to study endocytosis in Dictyostelia.



Call us : [800-304-5357](tel:800-304-5357)

Product attributes

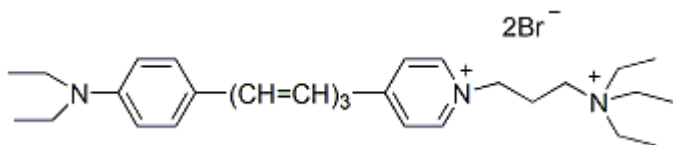
CAS number	162112-35-8
Probe cellular localization	Membrane/vesicular
For live or fixed cells	For live/intact cells
Assay type/options	Real-time imaging
Colors	Far-red
Excitation/Emission	510/750 nm (see product description)

Product Description

A widely used red fluorescent dye for following synaptic activity by staining synaptic vesicles at the synapse or neuromuscular junctions. When used in combination with the green fluorescent dye SynaptoGreen™ ([70020](#)), synapses or neuromuscular junctions can be imaged independently in two colors. SynaptoRed™ has also been used to study endocytosis in Dictyostelia. Please also see AM4-64 ([70025](#)), which is similar to SynaptoRed™, but with a formaldehyde-fixable amine group.

SynaptoRed™ can also be used to stain bacteria (gram-positive or gram-negative) and yeast, although in yeast it rapidly internalizes to vacuolar membranes. See our [Cellular Stains Table](#) for more information on how our dyes stain various organisms.

- $\lambda_{\text{Ex}}/\lambda_{\text{Em}}$ (membranes) = ~510/750 nm*
- Dark purple solid soluble in water
- $\text{C}_{30}\text{H}_{45}\text{Br}_2\text{N}_3$
- MW: 608
- [162112-35-8]



* Excitation/emission settings of 515/640 nm have been used for detection of yeast vacuole staining with SynaptoRed C2 (FM®4-64) (Ref. 4).

Nerve Terminal Dyes and Kits

Product	Catalog No.	Features
SynaptoGreen™ Dyes (Ex/Em ~480/660 nm in membranes)	70020... 70053	View full list of SynaptoGreen™ Dyes
SynaptoRed Dyes™ (Ex/Em ~510/750 nm in membranes)	70021... 70050	View full list of SynaptoRed™ Dyes
Background Reducers		
ADVASEP-7	70029	Sulfonated cyclodextrin that aids in removal of free dye during washes
SCAS	70037	Quenches extracellular fluorescences with fewer wash steps than ADVASEP-7
Sulforhodamine 101	80101	Red fluorescent dye that quenches extracellular fluorescence of SynaptoGreen™ dyes
Nerve Terminal Staining Kits		
Nerve Terminal Staining Kit I	70030	Includes SynaptoGreen™ C4 and ADVASEP-7
Nerve Terminal Staining Kit II (A)	70031	Includes AM1-43 and ADVASEP-7
Nerve Terminal Staining Kit II (B)	70031-1	Includes AM1-43 and SCAS
Nerve Terminal Staining Kit III	70032	Includes SynaptoGreen™ C4 and Sulforhodamine 101
Nerve Terminal Staining Kit V	70034	Includes SynaptoRed™ C2 and ADVASEP-7

m is the number of carbons in the lipophilic tail and n is the number of double bonds linking the two aromatic rings in the dye.
**The positively-charged end of SynaptoRed C2M is a trimethylammonium group.FM is a registered trademark of Thermo Fisher Scientific.

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Product link: <https://biotium.com/product/synaptoredtm-c2-also-known-as-fm4-64-a-trademark-of-molecular-probes-inc/>