

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.

Product attributes

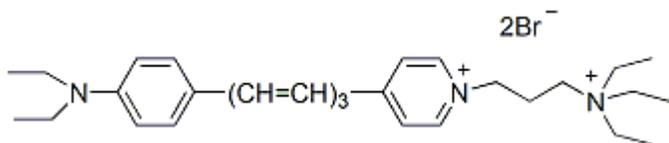
| | |
|-----------------------------|--------------------------------------|
| CAS number | 162112-35-8 |
| Probe cellular localization | Membrane/vesicular |
| For live or fixed cells | For live/intact cells |
| Assay type/options | Real-time imaging |
| Colors | Far-red |
| Excitation/Emission | 510/750 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.

- $\lambda_{Ex}/\lambda_{Em}$ (membranes) = ~510/750 nm*
- Dark purple solid soluble in water
- $C_{30}H_{45}Br_2N_3$
- 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-woo.supremeclients.com/product/synaptoRedtm-c2-also-known-as-fm4-64-a-trademark-of-molecular-probes-inc/>