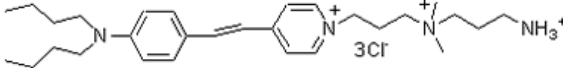
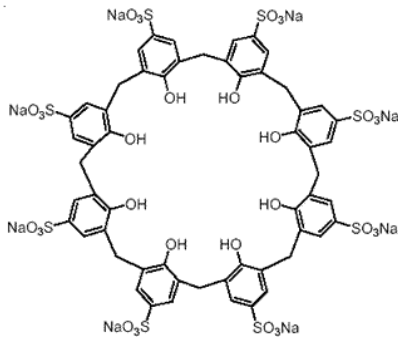


Instruction Manual

Catalog Number	PK-CA707-70031-1
Description	The Nerve Terminal Green and Red Staining Kits have been designed to detect and study recycling of the synaptic vesicles in neuronal synapses and neuromuscular junctions. Although each kit uses a different amphiphilic styryl pyridinium dye to visualize the vesicles, preparation of the tissue, the required reagents and the staining procedures are identical for each. The dyes included in the kits fluoresce intensely inside plasma membranes but only minimally in aqueous environments. When neurons are actively releasing neurotransmitters, dye is incorporated into recycled vesicles at the presynaptic terminal. The dye-containing vesicles are not susceptible to subsequent wash steps that remove the excess dye from the outer leaflet of the plasma membrane. Thus, only active presynaptic terminals are labeled. The included SCAS further reduces background fluorescence.
Quantity	1 set (1mg AM1-43 and 100 mg SCAS)
AM1-43	
Description	AM1-43 is a fixable, activity-dependent fluorescent nerve terminal probe and functions similarly as our SynapseGreen (PK-CA707-70020; equivalent to FM1-43, a trademark of Molecular Probes, Inc.) does, but with the additional property of being fixable. Thus, AM1-43 is a useful tool for synapse studies where subsequent fluorescent immunochemistry is desired. AM1-43 and FM1-43 have identical excitation and emission wavelengths.
Molecular Structure	
Molecular Formula	C ₂₉ H ₄₉ Cl ₃ N ₄
Molecular Weight	560.09 g/mol
Appearance	Dark-red solid
Purity	>98% (determined by TLC)
Solubility	Soluble in water and methanol.
Intended Use	For in vitro research use only. Not for diagnostic or therapeutic procedures.
References	Renger, J.J., et al., A developmental switch in neurotransmitter flux enhances synaptic efficacy by affecting AMPA receptor activation. <i>Neuron</i> 29, 469, (2001).

SCAS	
Description	SCAS is a quencher developed to reduce background fluorescence when using our fixable AM dyes, SynapseGreen and SynapseRed dyes. Unlike ADVASEP-7, SCAS dramatically lowers background fluorescence as soon as it is added to the preparation without the need for repeated washings.
Molecular Structure	 <p>The image shows the chemical structure of SCAS, a large macrocyclic molecule. It consists of a central ring with eight sulfonate groups (SO₃Na) and eight hydroxyl groups (OH) attached to the ring. The sulfonate groups are located at the 1, 3, 5, and 7 positions, while the hydroxyl groups are at the 2, 4, 6, and 8 positions. The overall structure is highly symmetrical and complex.</p>
Molecular Formula	C ₅₆ H ₄₀ Na ₈ O ₃₂ S ₈
Molecular Weight	1665.34 g/mol
Appearance	Off-white solid
Solubility	Soluble in water
Intended Use	For in vitro research use only. Not for diagnostic or therapeutic procedures.
Storage	Store desiccated at 4°C.

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