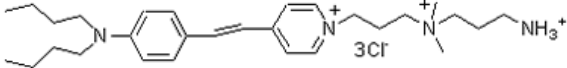


Instruction Manual

Catalog Number	PK-CA707-70031
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. ADVASEP-7 further reduces background by encapsulating the probes, preventing stain from accumulating interstitially.
Quantity	1 set (1 mg AM1-43 and 100 mg ADVASEP-7)
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. Neuron 29, 469, (2001).

ADVASEP-7	
Description	ADVASEP-7 is a sulfonated β -cyclodextrin derivative that has been reported to reduce background fluorescence when using SynapseGreen C4 (also called FM1-43; PK-CA707-70020) to stain brain slices.
Molecular Formula	$C_{42}H_{70-n}O_{35}(C_4H_6SO_3Na)_n$, avg. n = 6.5
Molecular Weight	~2163 g/mol
Appearance	White solid
Purity	>96% (determined by TLC)
Solubility	Soluble in water
References	Kay, A. R., A. Alfonso, et al. "Imaging synaptic activity in intact brain and slices with FM1-43 in <i>C. elegans</i> , Lamprey and Rat." <i>Neuron</i> 24: 809-817 (1999).
Intended Use	For in vitro research use only. Not for diagnostic or therapeutic procedures.
Storage	Store desiccated at 4°C.

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