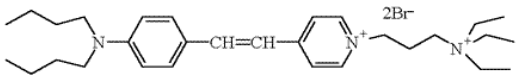
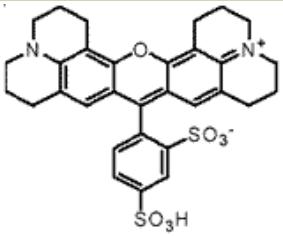
Nerve Terminal Green Staining Kit IV

PromoKine

Instruction Manual

Catalog Number	PK-CA707-70032
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.
Quantity	1 set (5x1 mg SynaptoGreen C4 and 100 mg Sulforhodamine 101)

SynapseGreen C4	
Description	A widely used green fluorescent dye for following synaptic activities by staining synaptic vesicles at the synapse or neuromuscular junctions.[1] When used in combination with the red fluorescent dye SynapseRed PK-CA707-70021), synapses or neuromuscular junctions can be imaged independently in two colors. Recent research results from Tsien's[2] and Kay's[3] labs showed that brain slices can be stained with the styryl dye SynapseGreen when SR101 (Sulforhodamine 101, PK-CA707-80101) or ADVASEP-7 (PK-CA707-70029) is used to reduce the background staining. PromoKine offers several Nerve Terminal Staining Kits for staining brain slices.
Molecular Structure	
Molecular Formula	$C_{30}H_{49}Br_2N_3$
Molecular Weight	612 g/mol
Appearance	Red solid
Purity	≥95% (determined by HPLC)
Absorption/Emission max.	λ_{ex}\ λ_{em}: 510/625 nm (in MeOH); 480/598 nm (in membranes).
Solubility	Soluble in water
References	1. J. Neurosci. 12, 363(1992) 2. Science. 255, 200(1992) 3. Neuron 24, 803(1999) 4. Neuron 24, 809(1999)
Intended Use	For in vitro research use only. Not for diagnostic or therapeutic procedures.
Storage	Store desiccated at 4°C.

Sulforhodamine 101	
Description	Sulforhodamine 101 has a longer absorption wavelength than sulforhodamine B. Like sulforhodamine B and G, these fluorescent dyes have been primarily used as polar tracers for the studies of neuronal cell morphology and cell-cell communications - in addition to their potential use in cancer drug screening.
Molecular Structure	
Molecular Formula	$C_{31}H_{30}N_2O_7S_2$
Molecular Weight	607 g/mol
Appearance	Red solid
Absorption/Emission max.	λ_{ex}\ λ_{em}: 586/605 nm
Solubility	Soluble in water
Intended Use	For in vitro research use only. Not for diagnostic or therapeutic procedures.
Storage	Store desiccated at RT.

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