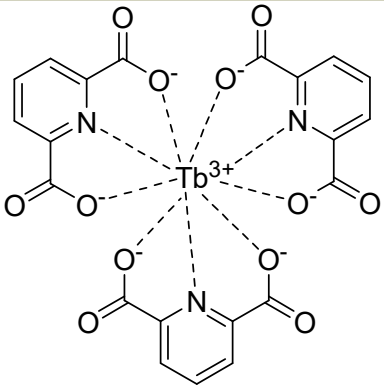
DPA/Terbium

For membrane fusion assays

Instruction Manual

Catalog Number	PK-CA707-80104
Description	The principle of DPA/Tb^{3+} for vesicle fusion assay is based on the fact that contact of the chelator dipicolinic acid (DPA) with terbium (III) forms an instant Tb^{3+}-DPA complex that is ~10,000 times more fluorescent than free Tb^{3+}. In the assay, separate vesicle populations are loaded with 2.5 mM $TbCl_3$ in 50 mM sodium citrate, or 50 mM DPA in 20 mM NaCl. Fusion of the two types of vesicles results in fluorescence increase at 490 nm or 545 nm, with excitation at 276 nm. Each set of product contains 1 g terbium trichloride and 1 g DPA in two separate vials. Please also see SDIP/Europium for membrane fusion assay (Cat.No. PK-CA707-80105), which results in intense red fluorescence upon complex formation.
Quantity	1 set (2 x 1 g)
Excitation / Emission Maxima	λex/λem(DPA/Tb^{3+} complex) = 276 (for complex) / 490 & 545 nm (for complex)
Molecular Structure	
Molecular Weight / Molecular Formula	DPA: 167.12 Da Terbium: 265.3 Da Molecular Formula: NA
Purity	NA
Appearance / Formulation / Solubility	Both DPA and Terbium are white solids. Both components are readily soluble in H_2O.
Storage & Stability	Although stable at RT, storage at 4°C is recommended.
Applications	See Description
References	1) Biochemistry 19, 6011(1980) 2) Nature 281, 690(1979) 3) Biochemistry 33, 5805(1994) 4) J.Biol. Chem. 269, 14473(1994)
Caution	Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.

PromoCell GmbH
Sickingenstr. 63/65
69126 Heidelberg
Germany

North America 1 – 866 – 251 – 2860 (toll free)
Deutschland 0800 – 776 66 23 (gebührenfrei)
France 0800 90 93 32 (ligne verte)
United Kingdom 0800 – 96 03 33 (toll free)
Other Countries +49 6221 – 649 34 0

Email: info@promokine.info
www.promokine.info

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