Biotium

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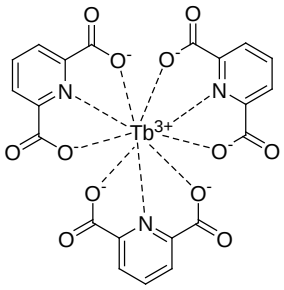
PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: **DPA/Terbirum for membrane fusion assay**

CATALOG # **80104**

COMPONENT **Component A: 1g DPA**
Component B: 1g Terbium

MOLECULAR INFORMATION:
MWt of DPA: 167.12
[499-83-2]
Mwt. of Terbium: 265.3
[13798-24-8]



PROPERTIES:

Color & Form	Both DPA and Terbium are white solid.
Solubility	Both components are readily soluble in H_2O.
Absorption/Emission	λ_{abs} = 276nm (for complex); λ_{em} 490 and 545nm (for complex)

STORAGE AND HANDLING: Both components are stable at 4°C.

APPLICATION:

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.[1-4] 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*** (#80105), which results in intense red fluorescence upon complex formation.

Ref.: 1) *Biochemistry* **19**, 6011(1980); 2) *Nature* **281**, 690(1979); 3) *Biochemistry* **33**, 5805(1994); 4) *J. Biol. Chem.* **269**, 14473(1994)

RELATED PRODUCTS *SDIP/Europium for membrane fusion assay(#80105)*

TOXICITY: Not established. Not listed by NTP, IARC or OSHA.

FIRST AID: 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.