Biotium
Supplier of fluorescent and related biochemical reagents for life science research and drug discovery
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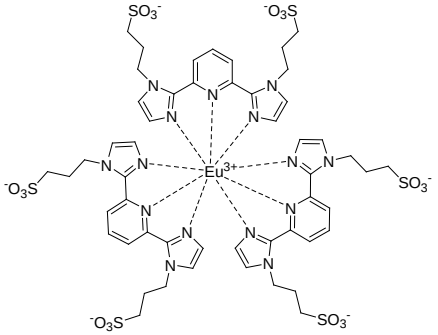
PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: **SDIP/Europium for membrane fusion assay**

CATALOG # **80105**

COMPONENT **Component A: 50 mg SDIP**
Component B: 25 mg $EuCl_3$

MOLECULAR INFORMATION: MWt of SDIP: 449
Mwt. of $EuCl_3$: ~258



PROPERTIES:

Color & Form SDIP is a light yellow solid.
$EuCl_3$ is in a colorless crystal form.

Solubility Both components are readily soluble in H_2O.

Absorption/Emission λ_{abs} = 250-320 nm (for complex); λ_{em} ~ 610 nm (for complex)

STORAGE AND HANDLING: Both components are stable at room temperature or 4°C. Aqueous solution of SDIP should be protected from light.

APPLICATION: SDIP/Europium can be used for vesicle fusion assays, similar to the use of DPA/Tb^{3+} (Nature **281**, 690(1979); Biochemistry **19**, 6011(1980); Biochemistry **33**, 5805(1994); J. Biol. Chem. **269**, 14473(1994)). Neither the ligand SDIP nor $Eu3^{+}$ is fluorescent in water. However, when SDIP and Eu^{3+} are combined at 3 to 1 or greater a ratio strong red fluorescence forms due to formation of SDIP/Eu^{3+} complex. High concentrations of phosphate, amino acids, or citrate will interfere with the complex formation and thus should be avoided. We recommend one population of vesicles be loaded with ~0.2mM $EuCl_3$ and the other population of vesicles be loaded with 1-2 mM SDIP. Including Ca^{2+} and EDTA in the external medium inhibits fluorescent complex formation outside the fused vesicles. Fluorescence is collected at ~610nm, with excitation at 250-320 nm.

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.

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