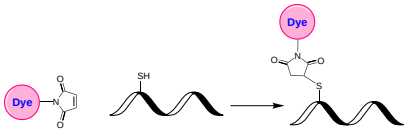
trFluor™ Tb-Cryptate maleimide

Catalog Number: 1445
Unit Size: 100 ug

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Solid
Molecular Weight	1552.59
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	304 nm
Emission Wavelength	544 nm

Applications

trFluor™ Tb-Cryptate maleimide is a terbium-based labeling reagent for covalent attachment to thiol-containing biomolecules through its maleimide reactive group. Many biological compounds present in cells, serum, or other biological fluids are naturally fluorescent, and the use of conventional prompt fluorophores can result in high background signals due to autofluorescence. The use of long-lived terbium cryptate probes combined with time-resolved detection (a delay between excitation and emission detection) helps minimize prompt fluorescence interference caused by biological molecules.

The reagent has good water solubility and contains a single reactive group, reducing the possibility of crosslinking during biomolecule labeling. Tb-Cryptate probes exhibit large Stokes shifts and long emission half-lives compared to traditional fluorophores such as Alexa Fluor and cyanine dyes. These probes are characterized by high stability, high emission yield, selective biomolecule labeling, and they maintain signal performance with reduced fluorescence quenching when conjugated to biological polymers such as antibodies.