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Thiazole Orange NHS ester

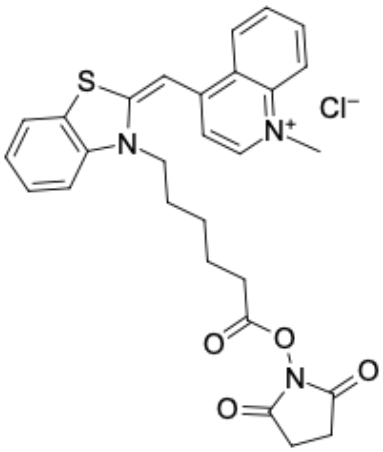
http://www.lumiprobe.com/p/thiazole-orange-nhs-ester

Thiazol Orange (TO) is an asymmetric cyanine dye whose fluorescence highly depends on the local environment. TO is essentially dark in solution; however, its fluorescence increases a thousandfold when TO is introduced into double-stranded DNA and RNA (dsDNA or dsRNA). When TO-labeled oligonucleotide is hybridized to its complementary sequence, TO acts as an intercalator.

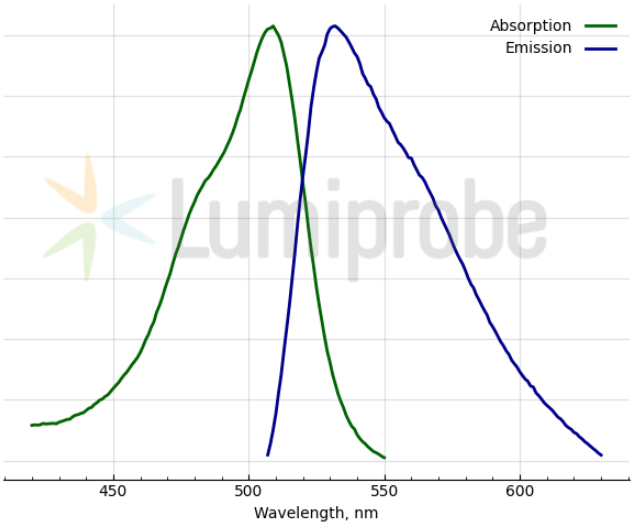
TO fluorescence is also induced by interaction with supramolecular hosts and amino acid side chains, which allows it to be used for detecting not only nucleic acids and proteins but also other analytes such as ions and small molecules.

The maximum absorption of TO with DNA is 509 nm, and the maximum emission is 532 nm.

Thiazole Orange NHS ester effectively reacts with amines and is well suited for labeling biomolecules (peptides, proteins, amino-DNA, etc.) in an aqueous medium. Thiazole Orange NHS ester can be useful for studying the binding of nucleic acids to other biomolecules, such as DNA-binding proteins.



Structure of Thiazole Orange NHS Ester



Absorption and emission spectra of Thiazole Orange

General properties

Appearance:	orange powder
Molecular weight:	538.07
Molecular formula:	$C_{28}H_{28}ClN_3O_4S$
Quality control:	NMR ^1H and HPLC-MS (95+%)
Storage conditions:	12 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

Spectral properties

Excitation/absorption maximum, nm:	509
Emission maximum, nm:	532