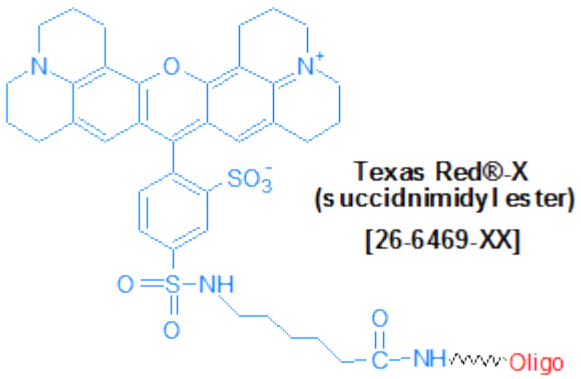
Texas Red NHS

Category	Fluorescent Dyes
Modification Code	TXR-N
Reference Catalog Number	26-6469
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	816.94



Sulforhodamine 101 acid chloride (Texas Red) is a red-purple fluorescent dye used for labeling oligonucleotides. Texas Red has an absorbance maximum of 589 nm and an emission maximum of 615 nm. Texas Red can be used in real-time PCR applications as a reporter moiety in TaqMan probes (1), Scorpion primers (2) and Molecular Beacons (3). For such probes, Texas Red is most commonly paired with the dark quencher BHQ-2, as the two have excellent spectral overlap.

Texas Red can be used to label DNA oligos for use as hybridization probes in a variety of in vivo and in vitro research or diagnostic applications, as well as for structure-function studies of DNA, RNA, and protein-oligonucleotide complexes. Oligos labeled with Texas Red at the 5'-end can be used as PCR and DNA sequencing primers to generate fluorescently-labeled PCR, sequencing or genetic analysis (AFLP or microsatellite) products.

Because Texas Red currently only is produced in the form of an NHS ester, oligos first must be synthesized with an Amino Linker modification (either at the ends or internally). The Texas Red NHS ester is then manually attached to the oligo through the amino group in a separate reaction post-synthesis. **References**

1. Livak, K.J., Flood, S.J.A., Marmaro, J., Giusti, W., Deetz, K. Oligonucleotides with fluorescent dyes at opposite ends provide a quenched probe system useful for detecting PCR product and nucleic acid hybridization.*PCR Methods Appl.* (1995), **4**: 1-6.
2. Thelwell, N., Millington, S., Solinas, A., Booth, J., Brown, T. Mode of action and application of Scorpion primers to mutation detection. *Nucleic Acids Res.* (2000), **28**: 3752-3761.
3. Tyagi, S., Kramer, F.R. Molecular beacons: probes that fluoresce upon hybridization. *Nat. Biotechnol.* (1996), **14**: 303-308.