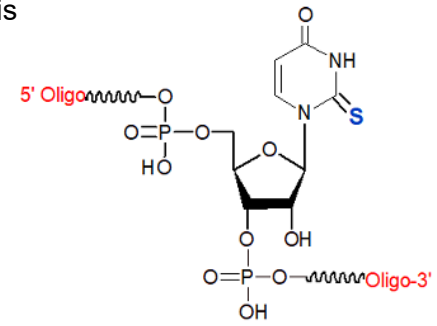
Oligo Modifications

For research use only. Not for use in diagnostic procedures for clinical purposes.

Thio-2-rU (s2U)

Category	RNA Oligo Synthesis
Modification Code	s2U
Reference Catalog Number	27-6537
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	322.22



2-Thio-Uridine (s2U)
[27-6537-XX]

- The effect of 2-thiouridine on sugar conformation and RNA duplex thermodynamics has been well documented (1,2). The presence of the 2-sulfur modification stabilizes the 3'-endo sugar conformation at the nucleoside and nucleotide level (1). Wobble base pair specificity can also be improved by substituting 2-thiouridine for uridine. Testa and co-workers (2) have shown the at S2U favors S2U-A pairing more than S2U-G pairing, and more than U favors U-A relative to U-G. The sulfur modification improves specificity while retaining other key uridine activities.
In addition, thiolated uridine has been shown to improve the rate and fidelity of both nonenzymatic (3) and ribozyme (4) catalyzed nucleotide addition in RNA synthesis.

References

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