



## Product Specifications

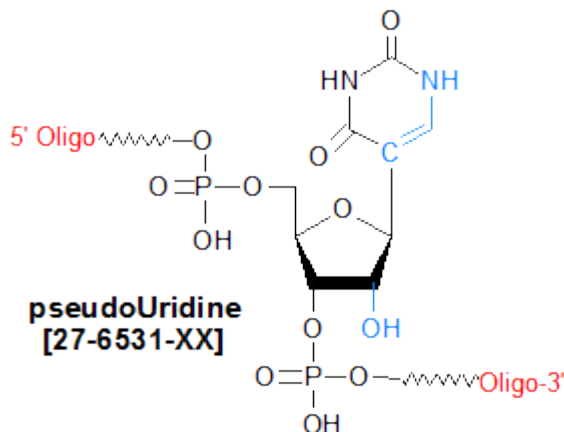
Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos, Fluorescent dyes, Affinity Ligands, Spacers & Linkers, Duplex Stabilizers, Minor bases, labeled oligos, Molecular Beacons, siRNA, phosphonates Locked Nucleic Acids (LNA); 2'-5' linked Oligos

## Oligo Modifications

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

### pseudoUridine (psi rU)

Category	Affinity Ligands
Modification Code	psi-rU
Reference Catalog Number	27-6531
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	306.17



Pseudouridine-("psi") is a C-glycoside isomer of uridine, and is the most common modified nucleoside found in structural RNA, such as tRNA, rRNA, snRNA, and snoRNA (1,2). Psi-modified RNA can be used as research tools for studies into the roles of this residue in RNA structure and function in the cell. Currently, the role of psi in RNA is a subject of active research, with some things now known. Psi can coordinate a water molecule through its free N1 hydrogen, thereby inducing a modest increase in rigidity on the nearby sugar-phosphate backbone. The presence of psi also enhances base-stacking. Such effects have been proposed as explanations for the deleterious functional effects observed in mutant bacterial strains that lack certain psi residues in tRNA or rRNA (2). Also, based on recent studies, it has been proposed that psi may offer RNA molecules protection from radiation (3). **References**

1. Hamma, T., Ferre-D-Amare, A.R. Pseudouridine synthases. *Chem. Biol.* (2006), **13**: 1125-1135.
2. Charette, M., Gray, M.W. Pseudouridine in RNA: what, where, how, and why. *IUBMB Life* (2000), **49**: 341-351.
3. Monobe, M., Arimoto-Kobayashi, S., Ando, K. beta-Pseudouridine, a beer component, reduces radiation-induced chromosome aberrations in human lymphocytes. *Mut. Res-Genet. Toxicol. and Env. Mutagen.* (2003), **538**: 93-99.