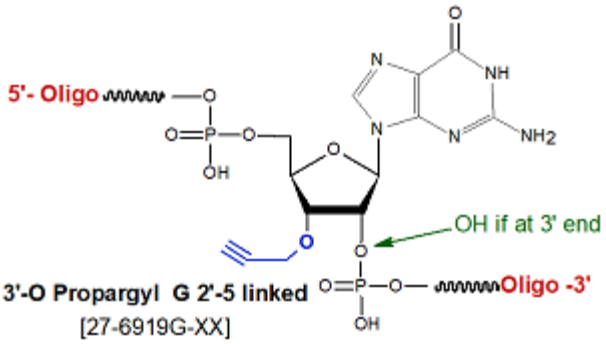
3'-O-propargyl G 2'-5' linked

Category	Click Chemistry
Modification Code	PPG-3-O-G
Reference Catalog Number	27-6919G
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	370.23



Click here for a complete list of Click Chemistry Oligo Modifications
Propargyl refers to triple/alkyne bond structure next to a saturated position with the following structure HC≡C−CH2−,. Placing a propargyl group at the 3' end in conjunction with an azide at the 5' position can be ligated using click chemistry.

Ligation of an oligo containing a 5'-azide with an oligo containing a 3'-propargyl group using Click Chemistry leads to a triazole linkage that has been shown to have in vivo biocompatibility. This technique has been used to synthesize DNA constructs up to 300 bases in length. When the resultant triazole linkage was placed in a PCR template, various polymerases were able to copy the sequence correctly. The linkage has also been shown to be compatible with transcription and rolling circle amplification, as well as gene expression in E. coli. In the RNA world, a hammerhead ribozyme containing the triazole linkage at the substrate cleavage site has been shown to retain its activity. A large variety of applications is envisaged for this biocompatible chemical ligation.

An azide can be introduced at the 5' end of an oligo using Iodo-dT (5'); catalog number. 26-6926.