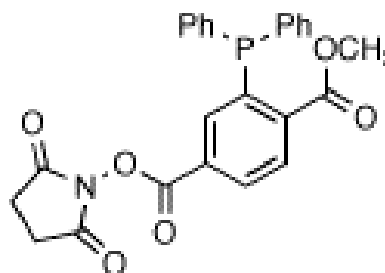


Phosphine Conjugator – Staudinger ligation –

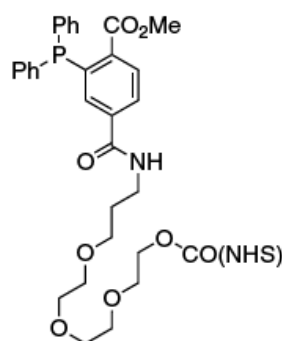
Products Description

An ingenious conjugation chemistry for linking covalently in very mild conditions an amine-containing molecule to an azide-bearing partner (i.e. available label-azide ligators or any other group converted to azide).

Name :	Phosphine Conjugator 4-(2,5-dioxo-1-pyrrolidinyl)-2-(diphenylphosphino)-1,4-benzenedicarboxylic acid-1-methyl ester; Phosphine ligator N-hydroxysuccinimide ester
Catalog Number :	FJ6761, 50mg FJ6762, 100mg FJ6763, 1g
Structure :	CAS: [532931-48-9]; MW= 461.40



Name :	Phosphine lc Conjugator Phosphine 14 atom spacer N-hydroxysuccinimide ester
Catalog Number :	FJ6771, 50mg
Structure :	14 atom PEO spacer



See [related products](#) for available Azide-labels conjugates (Biotin, Fluorescein, FluoProbes,...)

Storage: +4°C _(L) (or -20°C for long term) _(K)

Technical and Scientific Information

The Staudinger ligation, a modification of the Staudinger azide reduction, provides a way to form an amide bond between an azide containing molecule and an appropriately substituted triaryl phosphine ^{1,2}.

We now offer as a useful intermediate for the preparation of a variety of ligation conjugates.

• Applications

The Staudinger ligation has been used for fluorescent labeling of DNA by site specific ligation of a 5'-azido oligonucleotide with a preformed fluorescein-ligand conjugate ³. The utility of this technology in living systems demonstrates the potential for re-engineering a variety of cell and tissue surfaces ⁴. Additional applications include site selective post-translational modification of proteins with a biotin-phosphine ligand conjugate ⁵, ligation of human recombinant thrombomodulin to liver islets through bifunctional poly(ethylene glycol) (PEG) linkers ⁶, and liposome surface functionalization ⁷.

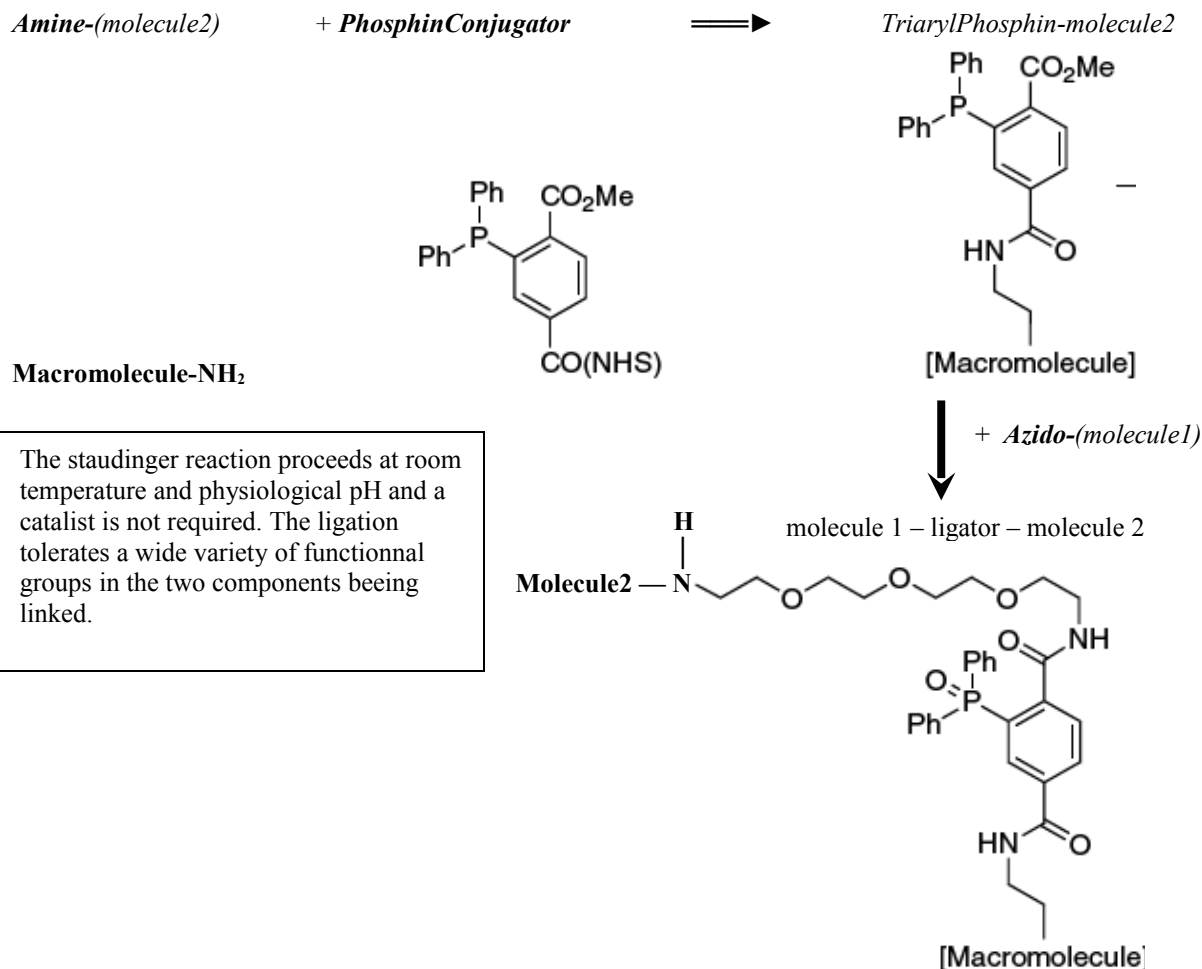
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FT-FJ6761

Chemistry

The amine (of molecule1) is first acylated (using i.e. a NHS-triazinPhosphin) then ligates in mild conditions with a Azide group of molecule2 by a Staudinger reduction of the azide, followed by intramolecular trapping of the intermediate phosphorimidate by the ortho-methyl ester on the phosphine.



References

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