

## Development of a New Method for the Synthesis of 4-arm PEG Through the Addition of Azide-Alkyne and Amine-Carboxy Groups

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We already synthesized 4 arm star PEG with dityrosine core. It has two different functional groups, carboxyl and amine groups. But it can cause many difficulties for the use because they can react with each other in the same reaction condition. Blocking and deblocking skills are essential for the control. So we designed the introduction of different functional groups such as azide and alkyn groups. The amine-carboxyl peptide bond reaction and azide-alkyn 1,3-dipolar cycloaddition reaction are independent. The new 4 arm PEG with different end groups, azide and amine groups was synthesized for the reason.