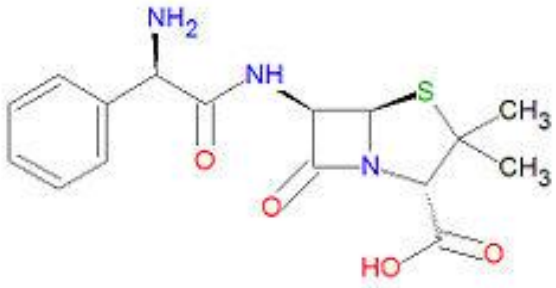
Ampicillin



Penicillin derivative with broad spectrum activity, ampicillin resistance is often used as a marker for plasmid transfer in genetic engineering.

ampicillin belongs to the beta-lactam antibiotic family, which is widely used in medicine but is readily compromised by bacterial antibiotic resistance , partly because of the production of beta-lactamases enzymes.

An ampicillin resistance gene (abbreviated ampR), is an important tool for genetic engineering. By constructing a plasmid that contains an antibiotic resistance gene as well as the gene being engineered or expressed, a researcher can ensure that when bacteria replicate, only the copies that carry the plasmid survive. This ensures that the gene being manipulated passes along when the bacteria replicates.

The most commonly used antibiotics in genetic engineering are generally "older" antibiotics that have largely fallen out of use in clinical practice. These include: Ampicillin ,kanamycin and tetracycline