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Product Datasheet

Beta-lactaminase, Recombinant, E. coli, aa20-377, His-Tag (AmpC, AmpA, Cephalosporinase)
USB-377716

Article Name	Beta-lactaminase, Recombinant, E. coli, aa20-377, His-Tag (AmpC, AmpA, Cephalosporinase)
Biozol Catalog Number	USB-377716
Supplier Catalog Number	377716
Alternative Catalog Number	USB-377716-20, USB-377716-100
Manufacturer	US Biological
Category	Molekularbiologie
Product Description	AmpC, also known as Beta-lactamase, is the most widespread resistance mechanism to beta-lactam antibiotics, such as the penicillins and the cephalosporins. These antibiotics have a common element in their molecular structure: a four-atom ring known as the beta-lactam ring. AmpC is a class C beta-lactamase, which means it is a metalloenzyme that requires a metal ion (usually manganese or zinc) for its activity. It is a serine beta-lactamase, meaning it uses a serine residue as the active site nucleophile to hydrolyze the beta-lactam ring of the antibiotic. AmpC is a dimeric enzyme, consisting of two identical subunits. Each subunit contains a signal sequence, a propeptide domain, and a mature domain. The mature domain contains the active site serine residue and the metal ion binding site. The propeptide domain is involved in the dimerization of the subunits. AmpC is a very stable enzyme and can withstand high temperatures and acidic pH conditions. It is also resistant to many common proteases, making it a useful tool for studying the molecular mechanisms of antibiotic resistance. AmpC is found in many bacteria, including Escherichia coli, Klebsiella pneumoniae, and Enterobacter cloacae. It is also found in some fungi and viruses. AmpC is a key enzyme in the development of antibiotic resistance, particularly in Gram-negative bacteria. It is often found in conjunction with other resistance mechanisms, such as efflux pumps and other beta-lactamases. AmpC is a important target for antibiotic development, as it is involved in the resistance of many important pathogens. It is also a useful tool for studying the molecular mechanisms of antibiotic resistance, as it is a well-studied enzyme with a clear structure and function. AmpC is a key enzyme in the development of antibiotic resistance, particularly in Gram-negative bacteria. It is often found in conjunction with other resistance mechanisms, such as efflux pumps and other beta-lactamases. AmpC is a important target for antibiotic development, as it is involved in the resistance of many important pathogens. It is also a useful tool for studying the molecular mechanisms of antibiotic resistance, as it is a well-studied enzyme with a clear structure and function.
Molecular Weight	41.8
NCBI	418574
Purity	95% (SDS-PAGE) under reducing conditions and visualized by coomassie blue stain
Form	Supplied as a liquid in 20mM Tris-HCl, pH 8.0, 10% glycerol