

Beta-lactamase TEM (bla) Recombinant Protein | bla recombinant protein

Recombinant Escherichia coli Beta-lactamase TEM (bla)

CATALOG # AAA18712	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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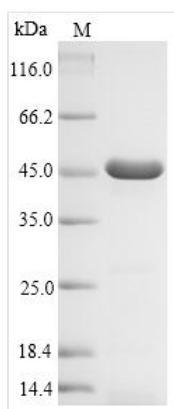
PRODUCT SYNONYMS

Beta-lactamase TEM (bla); Recombinant Escherichia coli Beta-lactamase TEM (bla); IRT-4; Penicillinase; TEM-1; TEM-16/CAZ-7; TEM-2; TEM-24/CAZ-6; TEM-3; TEM-4; TEM-5; TEM-6; TEM-8/CAZ-2; bla recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	24-286aa; Full Length of Mature Protein
Sequence	HPETLVKVKD AEDQLGARVG YIELDLNSGK ILESFRPEER FPMMSDFKVL LCGAVLSRVD AGQEQLGRRR HYSQNDLVEY SPVTEKHLTD GMTVRELCSA AITMSDNTAA NLLTTIGGP KELTAFLHNM GDHVTRLDRW EPELNEAIPN DERDTTMPAA MATTLRKLLT GELLTLASRQ QLIDWMEADK VAGPLLRSAL PAGWFIADKS GAGERGSRGI IALGPDGKP SRIVVIYTTG SQATMDERNR QIAEIGASLI KHW
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for bla recombinant protein	T-type are the most prevalent beta-lactamases in enterobacteria; they hydrolyze the beta-lactam bond in susceptible beta-lactam antibiotics, thus conferring resistance to penicillins and cephalosporins. T-3 and T-4 are capable of hydrolyzing cefotaxime and ceftazidime. T-5 is capable of hydrolyzing ceftazidime. T-6 is capable of hydrolyzing ceftazidime and aztreonam. T-8/CAZ-2, T-16/CAZ-7 and T-24/CAZ-6 are markedly active against ceftazidime. IRT-4 shows resistance to beta-lactamase inhibitors.
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References	Nucleotide sequence of the ampicillin resistance gene of <i>Escherichia coli</i> plasmid pBR322. Sutcliffe J.G. Proc. Natl. Acad. Sci. U.S.A. 75:3737-3741(1978) Complete nucleotide sequence of the <i>Escherichia coli</i> plasmid pBR322. Sutcliffe J.G. Cold Spring Harb. Symp. Quant. Biol. 43:77-90(1979) DNA replication of the resistance plasmid R100 and its control. Ohtsubo H., Ryder T.B., Maeda Y., Armstrong K., Ohtsubo E. Adv. Biophys. 21:115-133(1986) Partial amino acid sequence of penicillinase coded by <i>Escherichia coli</i> plasmid R6K. Ambler R.P., Scott G.K. Proc. Natl. Acad. Sci. U.S.A. 75:3732-3736(1978) The TEM-3 beta-lactamase, which hydrolyzes broad-spectrum cephalosporins, is derived from the TEM-2 penicillinase by two amino acid substitutions. Sougakoff W., Goussard S., Courvalin P. FEMS Microbiol. Lett. 56:343-348(1988) A new example of physical linkage between Tn1 and Tn21 the antibiotic multiple-resistance region of plasmid pCFF04 encoding extended-spectrum beta-lactamase TEM-3. Mabilat C., Lourenco-Vital J., Goussard S., Courvalin P. Mol. Gen. Genet. 235:113-121(1992) Characterization of the plasmid genes blaT-4 and blaT-5 which encode the broad-spectrum beta-lactamases TEM-4 and TEM-5 in enterobacteriaceae. Sougakoff W., Petit A., Goussard S., Sirot D., Bure A., Courvalin P. Gene 78:339-348(1989) An IS1-like element is responsible for high-level synthesis of extended-spectrum beta-lactamase TEM-6 in Enterobacteriaceae. Goussard S., Sougakoff W., Mabilat C., Bauernfeind A., Courvalin P. J. Gen. Microbiol. 137:2681-2687(1991) Nucleotide sequences of CAZ-2, CAZ-6, and CAZ-7 beta-lactamase genes. Chanal C., Poupard M.C., Sirot D., Labia R., Sirot J., Cluzel R. Antimicrob. Agents Chemother. 36:1817-1820(1992) Characterization and amino acid sequence of IRT-4, a novel TEM-type enzyme with a decreased susceptibility to beta-lactamase inhibitors. Brun T., Peduzzi J., Canica M.M., Paul G., Nevot P., Barthelemy M., Labia R. FEMS Microbiol. Lett. 120:111-117(1994) Beta-lactamase TEM1 of <i>E. coli</i>. Crystal structure determination at 2.5-A resolution. Jelsch C., Lenfant F., Masson J.-M., Samama J.-P. FEBS Lett. 299:135-142(1992) Crystal structure of <i>Escherichia coli</i> TEM1 beta-lactamase at 1.8-A resolution. Jelsch C., Mourey L., Masson J.-M., Samama J.-P. Proteins 16:364-383(1993) A potent new mode of beta-lactamase inhibition revealed by the 1.7 Å X-ray crystallographic structure of the TEM-1-BLIP complex. Strynadka N.C.J., Jensen S.E., Alzari P.M., James M.N.G. Nat. Struct. Biol. 3:290-297(1996) Crystal structure of an acylation transition-state analog of the TEM-1 beta-lactamase. Mechanistic implications for class A beta-lactamases. Maveyraud L., Pratt R.F., Samama J.-P. Biochemistry 37:2622-2628(1998) X-ray structure of the Asn276Asp variant of the <i>Escherichia coli</i> TEM-1 beta-lactamase direct observation of electrostatic modulation in resistance to inactivation by clavulanic acid. Swaren P., Golemi D., Cabantous S., Bulychev A., Maveyraud L., Mobashery S., Samama J.-P. Biochemistry 38:9570-9576(1999)
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NCBI AND UNIPROT INFORMATION

NCBI GI #	38638187
NCBI GeneID	3722457
NCBI Accession #	NP_943295.1
NCBI GenBank Nucleotide #	NC_005248.1
UniProt Accession #	P62593; P00810; Q47313
Molecular Weight	30.9 kDa
NCBI Official Full Name	beta-lactamase (plasmid)
NCBI Official Symbol	pIGAL1_03
NCBI Protein Information	beta-lactamase
UniProt Protein Name	Beta-lactamase TEM
UniProt Gene Name	bla
UniProt Entry Name	BLAT_ECOLX

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.