Beta-lactamase TEM/Bla Protein, E.coli (P.pastoris, His)

Cat. No.:	HY-P71804
Synonyms:	bla; blaT-3; blaT-4; blaT-5; TEM-1; TEM-16/CAZ-7; TEM-2; TEM-24/CAZ-6; TEM-3; TEM-4; TEM-5; TEM-6; TEM-8/CAZ-2
Species:	E.coli
Source:	P. pastoris
Accession:	P62593 (H24-W286)
Gene ID:	58463483
Molecular Weight:	Approximately 30.9 kDa

PROPERTIES

AA Sequence	H P E T L V K V K D A E D Q L G A R V G Y I E L D L N S G K I L E S F R P E E R F P M M S T F K V L L C G A V L S R V D A G Q E Q L G R R I H Y S Q N D L V E Y S P V T E K H L T D G M T V R E L C S A A I T M S D N T A A N L L L T T I G G P K E L T A F L H N M G D H V T R L D R W E P E L N E A I P N D E R D T T M P A A M A T T L R K L L T G E L L T L A S R Q Q L I D W M E A D K V A G P L L R S A L P A G W F I A D K S G A G E R G S R G I I A A L G P D G K P S R I V V I Y T T G S Q A T M D E R N R Q I A E I G A S L I K H W
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in PBS, 6% Trehalose, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The Beta-lactamase TEM/Bla protein group stands out as the predominant class of beta-lactamases in enterobacteria, exerting their resistance mechanism by hydrolyzing the beta-lactam bond in susceptible beta-lactam antibiotics. This enzymatic activity imparts resistance specifically to penicillins and cephalosporins. Among the TEM variants, TEM-3 and TEM-4 demonstrate the ability to hydrolyze cefotaxime and ceftazidime, while TEM-5 targets ceftazidime. TEM-6 extends its

hydrolyzing capability to ceftazidime and aztreonam. Notably, TEM-8/CAZ-2, TEM-16/CAZ-7, and TEM-24/CAZ-6 exhibit marked activity against ceftazidime. Additionally, IRT-4 showcases resistance to beta-lactamase inhibitors, highlighting the diverse enzymatic profiles within the TEM/Bla protein family, crucial in the context of antibiotic resistance in clinical settings.

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