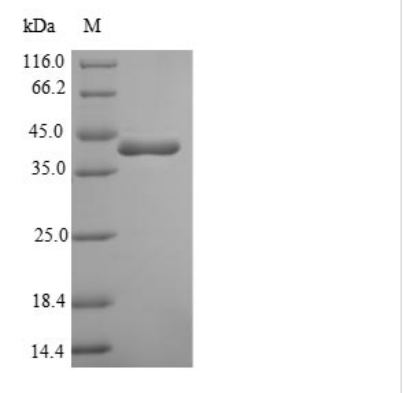
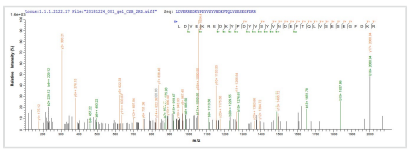
Recombinant Bacillus subtilis Penicillin-binding protein 4 (pbpD), partial

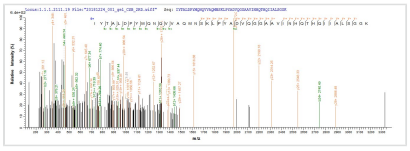
Product Code	CSB-EP334764BRJ
Abbreviation	Recombinant Bacillus subtilis pbpD protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P40750
Product Type	Recombinant Protein
Immunogen Species	Bacillus subtilis (strain 168)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	PNNPTLYDPLKHFDYTKSRQERLLKGLKDAGVITDKELKKAVKQKIKLDVEKRE DKYPDYVSYVNDEFTQLVSESEGFDKRLQKASGKQKEKIENELSARVSTLMKD GVKIYTALDPYMQNQVVAQMNSKLPYADVQGGAAVINHQTHQIIALSGGKNYQ KYDFNRAYQAYRQPGSSIKPLLDYGPYIEQTGATTSSTIDASKFCSKDYCPQN YNNRTYGTVTLDTAFKNSYNTPAIR
Research Area	others
Source	E.coli
Target Names	pbpD
Protein Names	Recommended name: Penicillin-binding protein 4 Short name= PBP 4
Expression Region	213-450aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	43.0kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP334764BRJ could indicate that this peptide derived from E.coli-expressed Bacillus subtilis (strain 168) pbpD.



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Description

Recombinant B. subtilis pbpD expression in E.coli requires the insertion of the target DNA fragment into an E.coli expression vector, routinely a plasmid vector, and the transferral of this vector into E.coli cells. The cells are then cultured and induced to express this pbpD protein. The cells are harvested by centrifugation, samples prepared and proteins detected by polyacrylamide gel electrophoresis and subsequent staining of the gel with Coomassie Brilliant Blue or silver stain or by immunoblotting. The pbpD protein expression in E.coli is highly scalable and can be adjusted from the bacterial colony to conical flasks for liquid cultures, to fermentation reaction chambers.

Penicillin-binding protein 4 (pbpD, PBP4) can promote antibiotic resistance independently of PBP2a. Altered expression of PBP4 is at least partially responsible for the VISA phenotype. PBP4 activity and regulation appear to be important for the response of S. aureus to vancomycin. PBP4 is associated with low levels of resistance to β-lactam antibiotics, but the mechanism for this is unclear. PBP4 plays a role in cell wall biosynthesis along with multiple PBPs. Overexpression of PBP4 is associated with low levels of methicillin resistance.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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