# Recombinant Clostridium botulinum Penicillin-binding protein 1A (pbpA),Partial

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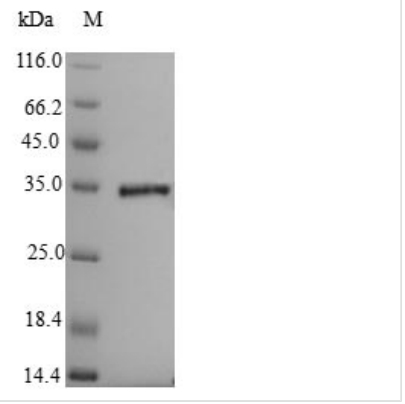
| **Product Code** | CSB-EP401992CWV |
| **Relevance** | Cell wall formation. Synthesis of cross-linked peptidoglycan from the lipid intermediates. The enzyme has a penicillin-insensitive transglycosylase N-terminal domain (formation of linear glycan strands) and a penicillin-sensitive transpeptidase C-terminal domain (cross-linking of the peptide subunits). |
| **Abbreviation** | Recombinant Clostridium botulinum pbpA 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.** | A5I6G4 |
| **Alias** | Peptidoglycan TGase DD-transpeptidase |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Clostridium botulinum (strain Hall / ATCC 3502 / NCTC 13319 / Type A) |
| **Purity** | Greater than 90% as determined by SDS-PAGE. |
| **Sequence** | VDRISGKLPTQLSYRDPRGSTVYNEFFINGTIPTEYDDIHVEAQINKLTGKLASK FTPSFLVESRVFLRRDYSPGVELLDQQWLLPYSIDEGGSLPPTEEKNNSNTRD KNKDKNKNKNKDKNPSQDKPNNNNNDNNSNNNNNNNDNNNNTKPPENDSN QNHEDNKNKQ |
| **Research Area** | Cell Biology |
| **Source** | E.coli |
| **Target Names** | pbpA |
| **Expression Region** | 663-830aa |
| **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** | 35.2kDa |
| **Protein Length** | Partial |
| **Image** | |




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

## Description

The recombinant Clostridium botulinum pbpA was expressed with the amino acid range of 663-830. The expected molecular weight for the pbpA protein is calculated to be 35.2 kDa. Expression of this pbpA protein is conducted in e.coli. Fusion of the N-terminal 6xHis-SUMO tag into the pbpA encoding gene fragment was conducted, allowing for easier detection and purification of the pbpA protein in subsequent stages.

Clostridium botulinum Penicillin-binding protein 1A (pbpA) is a crucial component involved in cell wall synthesis and maintenance within the bacterium Clostridium botulinum. Its primary function is to catalyze the formation of peptide cross-links in the bacterial cell wall, imparting structural integrity. In microbiology and antibacterial drug development, pbpA is a focal point for understanding antibiotic resistance mechanisms and exploring novel therapeutic targets. Its research areas encompass elucidating its role in cell wall biosynthesis and investigating strategies to combat antibiotic resistance in Clostridium botulinum. PbpA's significance lies in its contribution to fundamental bacterial biology and its potential as a target for antibacterial interventions.

## 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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