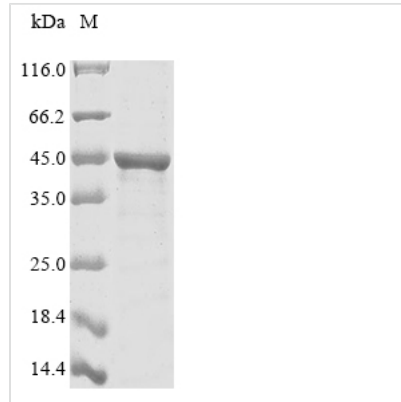




Recombinant Chlamydia trachomatis Major outer membrane porin, serovar B (ompA)

Product Code	CSB-EP332912DSA
Abbreviation	Recombinant Chlamydia trachomatis ompA protein
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.	P23421
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Proteins
Immunogen Species	Chlamydia trachomatis
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	LPVGNPAEPSLMIDGILWEGFGGDPCTTWVDAISMRMGYYGDFVFDRVL KTDVNKEFQMGAKPTTTTGNVAVPSTLTARENPAYGRHMQDAEMFTNAACM ALNIWDRFDVFCTLGASSGYLKGNSASFNLVGLFGNNENQTKVSNGAFVPM SLDQSVVELYTDFAWSVGARAALWECGCATLGASFQYAQSKPKVEELNVL CNAAEFTINKPKGYVGKELPLDLTAGTDAATGTKDASIDYHEWQASLALSYRL NMFTPYIGVKWSRASFDADTIRIAQPKSAETIFDVTTLNPTIAGAGDVKTS AEGQLGDTMQIVSLQLNKMKSRSKSCGIAVGTTIVDADKYAVTVETRLIDERA AHVNAQFRF
Research Area	Microbiology
Source	E.coli
Target Names	ompA
Protein Names	Recommended name: Major outer membrane porin, serovar B Short name= MOMP
Expression Region	23-394aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	47.7 kDa
Protein Length	Full Length of Mature Protein
Image	



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

Description

This recombinant *Chlamydia trachomatis* Major outer membrane porin, serovar B (ompA) comes from an *E. coli* expression system and contains the full length of the mature protein (23-394aa). The protein carries both an N-terminal 10xHis-tag and C-terminal Myc-tag, which makes purification and detection more straightforward. SDS-PAGE analysis shows purity levels exceeding 85%, suggesting it should work well for different research applications.

The major outer membrane porin (ompA) of *Chlamydia trachomatis* appears to be essential for maintaining the bacterial outer membrane's structural integrity and controlling what passes through it. This component likely helps keep the membrane stable while managing the transport of small molecules. Researchers studying bacterial pathogenesis and looking for new therapeutic targets may find understanding its function and how it interacts with host cells particularly valuable.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Validation Studies

Researchers can use this recombinant *C. trachomatis* OmpA protein as an immunogen to create polyclonal or monoclonal antibodies against the major outer membrane porin. The dual-tag design—with its N-terminal His-tag and C-terminal Myc-tag—simplifies both purification and detection during antibody screening. Since the expressed mature protein region (23-394aa) represents the native antigenic surface that appears during natural infections, it may produce antibodies that recognize native epitopes effectively. Scientists could then validate these antibodies through Western blot, ELISA, or immunofluorescence assays using the recombinant protein.

2. Protein-Protein Interaction Studies

Pull-down assays can take advantage of this dual-tagged recombinant OmpA to



hunt for potential binding partners or host cell receptors that might interact with *C. trachomatis* outer membrane components. The N-terminal His-tag works well for attachment to nickel-based affinity matrices, while the C-terminal Myc-tag offers another way to detect the protein and check its integrity during interaction experiments. Researchers can incubate cell lysates or purified candidate proteins with immobilized OmpA to look for specific binding interactions under controlled laboratory conditions.

3. Immunological Assay Development

This recombinant protein may serve as a standardized antigen for creating and fine-tuning various immunoassays, including ELISA-based detection systems and immunoblotting protocols. The >85% purity level should be adequate for use as a coating antigen or positive control in serological research. The dual-tag system helps with assay development by offering multiple detection approaches and allowing precise measurement of protein loading in experimental setups.

4. Biochemical Characterization Studies

Scientists can subject the purified recombinant OmpA protein to various biochemical analyses to examine its physicochemical properties—things like thermal stability, pH sensitivity, and how it behaves in different detergents. Size exclusion chromatography and dynamic light scattering experiments might reveal insights into the protein's oligomerization state and whether it tends to aggregate under different buffer conditions. These studies could help build a better understanding of this important chlamydial surface protein's basic biochemical behavior in controlled laboratory settings.

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

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.