Recombinant Bacterial Outer Membrane Protein-A

Cat. No. OmpA-249B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The recombinant form was found to be undistinguishable from the wild type when examined by SDS-PAGE and gel filtration chromatography yielding a 48 kDa monomeric protein. The immunological similarity of the protein samples was demonstrated by employing polyclonal and monoclonal antibodies in ELISA and Western Blot techniques. All forms of A-protein were found to activate the secretion of tumour necrosis factor alpha from murine macrophage. The OmpA is purified by proprietary chromatographic techniques. The species specific structural gene for the monomeric form of A-protein was cloned into a pET-3d plasmid in order to express and produce a recombinant form of the protein in*E. coli*BL21 (DE3).
Species	Bacterial
Source	E.coli
Description	Achromogenic atypical Aeromonas salmonicida is the causative agent of goldfish ulcer disease. Virulence of this bacterium is associated with the production of a paracrystalline outer membrane A-layer protein. The induced protein was isolated from inclusion bodies by a simple solubilization-renaturation procedure and purified by ion exchange chromatography on Q-Sepharose to over 95% pure monomeric protein. Recombinant A-protein was compared by biochemical, immunological and molecular methods with the A-protein isolated from atypical A. salmonicida bacterial cells by the glycine and the membrane extraction methods.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found

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	to be Met-Asp-Val-Val-Ile-Ser.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	It is recommended to reconstitute the lyophilized OmpA in sterile 0.4% NaHCO3.
Stability	Lyophilized Bacterial Outer Membrane Protein-A although stable at room temperature for 3 weeks, should be stored desiccated below -18C. Upon C between 2-7 days and for future use reconstitution OmpA should be stored at 4 below -18C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.
Biological Activity	The interaction of bacterial and recombinant A-layer protein with murine macrophages was directed at determining the effect of A-protein on intracellular events that occur in primed macrophages. This was accomplished by measuring the cytotoxic product produced by peritoneal macrophages when exposed to A-protein coated latex beads. Thioglycolate elicited macrophages exhibited a low level of activation (18% cytotoxicity) that was significantly increased (48% cytotoxicity) in the presence of latex beads. Coating of the latex beads with each of the three A-protein products resulted in an increase of cytoxicity (mean +/- SEM) from 48% to 91%.

GENE INFORMATION

Gene Name	ompA outer membrane protein A [Bdellovibrio bacteriovorus HD100]
Synonyms	ompA; Bacterial outer membrane protein; outer membrane protein A
Gene ID	2733446

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Protein Refseq	NP_967374

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