

Streptococcus pneumoniae* Family 2, Clade 4 Pneumococcal Surface Protein A (PspA UAB100) with C-Terminal Histidine Tag, Recombinant from *Escherichia coli

Catalog No. NR-51405

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Contributor

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Manufacturer:

BEI Resources

Product Description:

NR-51405 is a recombinant form of the pneumococcal surface protein A (PspA UAB100) from *Streptococcus pneumoniae* (*S. pneumoniae*) Family 2, Clade 4.^{1,2,3,4} The recombinant PspA UAB100 containing a C-terminal hexahistidine tag was expressed in *Escherichia coli* BL21(DE3) pLysS and purified by IMAC/Ni⁺⁺ affinity chromatography. The predicted protein sequence is shown in Figure 1.

Material Provided:

Each vial contains 250 µL of purified recombinant protein in PBS, pH 7.4. The concentration, expressed as µg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:

Purified recombinant PspA UAB100 protein was packaged aseptically, in screw-capped plastic cryovials. This product is provided frozen on dry ice and should be stored at -80°C or colder immediately upon arrival.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Streptococcus pneumoniae* Family 2, Clade 4 Pneumococcal Surface Protein A (PspA UAB100) with C-Terminal Histidine Tag, Recombinant from *Escherichia coli*, NR-51405."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories, 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Yother, J., and D. E. Briles. "Structural Properties and Evolutionary Relationships of PspA, a Surface Protein of *Streptococcus pneumoniae*, as Revealed by Sequence Analysis." *J. Bacteriol.* 174 (1992): 601-609. PubMed: 1729249.
2. Hollingshead, S. K., R. Becker, and D. E. Briles. "Diversity of PspA: Mosaic Genes and Evidence for Past Recombination in *Streptococcus pneumoniae*." *Infect. Immun.* 68 (2000): 5889-5900. PubMed: 10992499.
3. Briles, D. E., et al. "Immunization of Humans with Recombinant Pneumococcal Surface Protein A (rPspA) Elicits Antibodies that Passively Protect Mice from Fatal Infection with *Streptococcus pneumoniae* Bearing Heterologous PspA." *J. Infect. Dis.* 182 (2000): 1694-1701. PubMed: 11069242.
4. Briles, D. E., et al. "The Potential to Use PspA and Other Pneumococcal Proteins to Elicit Protection Against Pneumococcal Infection." *Vaccine* 18 (2000): 1707-1711. PubMed: 10689153.

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Figure 1: Predicted Protein Sequence

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1  MEESPVASQS KA EKDYDAAV KKSEAAKKHY EEAKKKAKEA QKKYDEDQKK
51  TEDKAEAVKK ADEELQKANL EVQKAYVEYR EAKAKDKASA EQKIKEATQK
101 QEEANKKFNE EQAKVVPEAS DLAVTKQKAE EAKKEAEVAK KKSEEAKEV
151 EVEKNKILEQ DAENEKKIDV LQNKVADLEK EIADAEKTVA DLEKEVAKLE
201 KDVEGFKESD GEYAEFYLEA AEKDLATKKA ELAEAKIKAT TKKAELEKAE
251 AELENLLSTL DPEGKTQDEL DKETAEAEIN KKVEALQNKV AELEEEELSKL
300 EDNLKVAETN NVEDYIKEGL EEAIATKQAE LEKTQKALDT ALNELGPDGD
351 EEETPLEHHH HHH
  
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Plasmid-derived amino acids – Residues 1, 356,357

PspA Protein – Residues 2 to 355*

Histidine Tag – Residues 358 to 363

*This represents 354 amino acid residues of the PspA protein from *S. pneumoniae* UAB100 (GenPept: WP_079116696).