

## Recombinant Salmonella Typhi OMP, His-tagged

**Cat. No.** SAL-575    **Lot. No.** (See product label)

### SPECIFICATION

#### Product Overview

Salmonella typhi Outer Membrane Protein (OMP) is a recombinant antigen manufactured in E. coli cells for immunoassay development and other applications.

#### Tag

His

#### Background

Typhoid fever is an acute systemic illness caused by *Salmonella enterica* serovar Typhi which leads to infections in children and adults resulting in high morbidity (Paul & Bandyopadhyay, 2017). *S. enterica* are noncapsulated, nonsporulating, facultative anaerobic bacilli, which contain in their outer membrane a group of proteins (OMPs) which include Braun's lipoprotein, the porins (ompC, ompF, ompD, phoE, etc.) and the heat-modifiable protein (Omp A). The cell outer membrane proteins (OMPs) play an essential role in adaptation to environmental conditions, motility, adherence, and host cell colonization. These proteins also function in the transmembrane transport of nutrients and ions and play a significant role in the injection of toxins and cellular proteases, as well as the formation of channels for the removal of antibiotics (efflux pumps).

Vaccination against *S. typhi* is an essential tool for the effective management of typhoid fever. However, the currently available typhoid vaccines have several limitations such as short-term immunity, and they are not cost effective. *S. typhi* OMPs have been demonstrated to be potent immunogens, which elicit long-lasting and protective immunity (Liu et al., 2016) and several have been investigated as potential vaccine candidates, virulence factors, and diagnostic antigens (Isibasi et al., 1988). For example, the OMP from *S. typhi* is a major immunogenic target to synovial fluid lymphocytes of patients with reactive arthritis (ReA)/undifferentiated

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spondyloarthropathy (uSpA) (Pocanschi et al. 2013). Therefore, these antigens are useful candidates for vaccine studies.

|                     |                                                                                                                                                                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>       | Greater than 95% purity                                                                                                                                                                                                                          |
| <b>Formulation</b>  | 20mM Na-carbonate Buffer, pH10                                                                                                                                                                                                                   |
| <b>Applications</b> | Suitable for use in ELISA and Western Blot                                                                                                                                                                                                       |
| <b>Notes</b>        | This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations. |
| <b>Type</b>         | Recombinant                                                                                                                                                                                                                                      |
| <b>ClassID 1</b>    | Infectious Disease                                                                                                                                                                                                                               |

## GENE INFORMATION

|                 |                                       |
|-----------------|---------------------------------------|
| <b>Synonyms</b> | Salmonella Typhi Outer Membrane (OMP) |
|-----------------|---------------------------------------|

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