## Recombinant Human Pentraxin 3/TSG-14 Protein(His Tag)

#### Catalog Number: PDMH100346

Note: Centrifuge before opening to ensure complete recovery of vial contents.

| Description    |  |  |  |
|----------------|--|--|--|
| Species        | Human  |  |  |
| Source         | Mammalian-derived Human Pentraxin 3/TSG-14 proteins Glu18-Ser381, with an C-             |  |  |
|                | terminal His   |  |  |
| Calculated MW  | 39.9 kDa   |  |  |
| Observed MW    | 45 kDa   |  |  |
| Accession      | P26022   |  |  |
| Bio-activity   | Not validated for activity   |  |  |
| Properties     |  |  |  |
| Purity         | > 90% as determined by reducing SDS-PAGE.  |  |  |
| Endotoxin      | < 1.0 EU/mg of the protein as determined by the LAL method                               |  |  |
| Storage        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -8  |  |  |
|                | °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of      |  |  |
|                | reconstituted samples are stable at $< -20^{\circ}$ C for 3 months.                      |  |  |
| Shipping       | This product is provided as lyophilized powder which is shipped with ice packs.          |  |  |
| Formulation    | Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with 5% Trehalose and 5%         |  |  |
|                | Mannitol.  |  |  |
| Reconstitution | It is recommended that sterile water be added to the vial to prepare a stock solution of |  |  |
|                | 0.5 mg/mL. Concentration is measured by UV-Vis.  |  |  |

#### Data

| kDa | м | R |  |
|-----|---|---|--|
| 80  | _ |   |  |
| 60  | - | _ |  |
| 40  | - | - |  |
| 30  |   |   |  |
| 20  |   |   |  |
|     |   |   |  |
| 12  |   |   |  |

SDS-PAGE analysis of Human Pentraxin 3/TSG-14 proteins, 2 μg/lane of Recombinant Human Pentraxin 3/TSG-14 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 45 KD

### Background

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Pentraxin-related protein PTX3, also known as Tumor necrosis factor alpha-induced protein 5, Tumor necrosis factorinducible gene 14 protein, TSG-14, PTX3 and TNFAIP5, is a secreted protein that contains one pentaxin domain. PTX3 plays a role in the regulation of innate resistance to pathogens, inflammatory reactions, possibly clearance of selfcomponents and female fertility. Pentraxins are a family of evolutionarily conserved multifunctional pattern-recognition proteins characterized by a cyclic multimeric structure. Based on the primary structure of the subunit, the pentraxins are divided into two groups: short pentraxins and long pentraxins. C-reactive protein (CRP) and serum amyloid P-component (SAP) are the two short pentraxins. The prototype protein of the long pentraxin group is pentraxin 3 (PTX3). CRP and SAP are produced primarily in the liver in response to IL-6, while PTX3 is produced by a variety of tissues and cells and in particular by innate immunity cells in response to proinflammatory signals and Toll-like receptor (TLR) engagement. PTX3 is essential in female fertility by acting as a nodal point for the assembly of the cumulus oophorus hyaluronan-rich extracellular matrix. PTX3 interacts with several ligands, including growth factors, extracellular matrix components and selected pathogens, playing a role in complement activation and facilitating pathogen recognition by phagocytes, acting as a predecessor of antibodies. PTX3 may also contribute to the pathogenesis of atherosclerosis.