

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Gln21-Asp224, with a C-terminal 10-His tag  
Accession # P12246

**N-terminal Sequence Analysis** No results obtained: Gln21 predicted

**Predicted Molecular Mass** 25 kDa

**SPECIFICATIONS**

**SDS-PAGE** 30 kDa, reducing conditions

**Activity** Measured by its binding ability in a functional ELISA.  
Immobilized Recombinant Mouse Pentraxin 2 at 10 µg/mL (100 µL/well) can bind recombinant human CD32a Fc Chimera with a linear range of 0.4-25 µg/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in Tris-HCl, NaCl and Imidazole with Trehalose. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 100 µg/mL in sterile PBS.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Pentraxin 2 (also known as Serum Amyloid P Component or SAP) is a secreted glycoprotein that is a universal non-fibrillar component of amyloid deposits. Amyloid is an abnormal extracellular deposit of insoluble protein fibrils that can lead to tissue damage and disease (1-3). Pentraxin 2 belongs to the pentraxin (pentaxin) family, whose members have a characteristic pentagonal discoid arrangement of five non-covalently bound subunits (4). Pentraxin domains contain the consensus sequence, HxCx(S/T)WxS (x = any amino acid), a lectin fold, and two calcium-binding sites (1). They bind to a variety of unrelated molecules in a calcium-dependent lectin-like manner (1, 4, 5). Pentraxin 2 and C-reactive protein (CRP) are members of the classical or short pentraxin subfamily and share 46% amino acid (aa) identity (1). Mouse Pentraxin 2 is the major acute-phase protein whose expression is dependent on complement activation, IL-6 and/or IL-1β, while in humans, CRP is the major acute-phase protein (2, 5, 9). Both are produced and secreted by liver hepatocytes and circulate in plasma. The 204 aa mature mouse Pentraxin 2 shares 79% aa identity with rat Pentraxin 2 and 63-68% aa identity with human, guinea pig, golden hamster, porcine, and bovine Pentraxin 2 (2, 5). Amyloid deposits containing Pentraxin 2 are implicated in a diverse range of diseases including Alzheimer's, prion diseases, type 2 diabetes and various systemic amyloidoses (3, 6, 7). Pentraxin 2 regulates the solubility of amyloid fibrils and protects them from degradation. In addition to its pathogenic role, Pentraxin 2 also has an important physiological function in innate immunity (8). It is an opsonin that interacts with all three types of human Fcγ receptors that mediate neutrophil phagocytosis (8). Pentraxin 2 has been proposed to bind and sequester a variety of ligands including auto-antigens, apoptotic cells, chromatin, DNA, and micro-organisms (1-3). Pentraxin 2 is also a normal component of basement membranes (1).

**References:**

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