



# Recombinant Protein Technical Manual

**Recombinant Human SerpinA7/TBG Protein (His Tag)**  
RPES4545

## Product Data:

**Product SKU:** RPES4545

**Size:** 20µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_000345.2

## Protein Information:

**Molecular Mass:** 45.5 kDa

**AP Molecular Mass:** 55-60 kDa

**Tag:** C-His

**Bio-activity:**

**Purity:** > 97 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** TBG

## Immunogen Information:

**Sequence:** Met 1-Ala 415

## Background:

Thyroxine-binding globulin, also known as T4-binding globulin, Serpin A7 and TBG, is a secreted protein which belongs to the serpin family. TBG is synthesized primarily in the liver as a 54 kDa protein. TBG is genomically a serpin, although it has no inhibitory function like many other members of this class of proteins. TBG binds thyroid hormone in circulation. It is one of three proteins (along with transthyretin and albumin) responsible for carrying the thyroid hormones thyroxine (T4) and 3,5,3'-triiodothyronine (T3) in the bloodstream. Of these three proteins, TBG has the highest affinity for T4 and T3, but is present in the lowest concentration. Despite its low concentration, TBG carries the majority of T4 in serum. Due to the very low serum concentration of T4 and T3, TBG is rarely more than 25% saturated with its ligand. Unlike transthyretin and albumin, TBG has a single binding site for T4/T3. TBG tests are sometimes used in finding the reason for elevated or diminished levels of thyroid hormone.