



Recombinant Protein Technical Manual

**Recombinant Human Thyroid peroxidase/TPO
Protein (257 Ser/Ala, 725 Pro/Thr, His Tag)
RPES0835**

Product Data:

Product SKU: RPES0835

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: P07202

Protein Information:

Molecular Mass: 93.8 kDa

AP Molecular Mass: 9000 kDa

Tag: C-His

Bio-activity:

Purity: > 95 % 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 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

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

Application:

Synonyms: MSA;TDH2A;TPX

Immunogen Information:

Sequence: Met 1-Arg846, 257 Ser/Ala, 725 Pro/Thr

Background:

Thyroid peroxidase is a membrane-bound glycoprotein which belongs to the peroxidase family, XPO subfamily. It contains 1 EGF-like domain and 1 Sushi (CCP/SCR) domain. Thyroid Peroxidase represents one of the main autoantigenic targets in autoimmune thyroid disease of humans. It used to be taken as the formerly so-called `microsomal antigen` several years ago. As an integral membrane glycoprotein it is restricted to the apical plasma membrane of the follicular epithelial cells and comprises two identical subunits of approx 100 kDa molecular weight. Thyroid peroxidase is an enzyme expressed abundantly in the thyroid that liberates iodine for addition onto tyrosine residues on thyroglobulin for the production of thyroxine or triiodothyronine, thyroid hormones. Thyroid peroxidase plays a key role in the thyroid hormone biosynthesis by catalysing both the iodination of tyrosyl residues and the coupling of iodotyrosyl residues in thyroglobulin to form precursors of the thyroid hormones T4 and T3.