

## Taq-Polymerase RecAb (TP7)

### Description:

**Taq-Polymerase RecAb (TP7)** is a recombinant mouse antibody (mIgG2a,κ) that binds to Taq polymerase and inhibits the polymerase activity at room temperature. The antibody is inactivated and the enzyme released upon temperature increase (“hot start antibody”) during normal PCR cycling conditions, allowing reactions to be set up at room temperature. The target Taq polymerase (Uniprot: [P19821](#)) is produced by the thermophilic eubacterium *Thermus aquaticus* and is a popular thermostable DNA polymerase used for PCR [1][2][3]. The original TP7 antibody was prepared by Scalice et al. (1994) [4] through mouse immunization with recombinant Taq expressed in *E. coli*.

The recombinant antibody is produced under serum-free (animal component-free) conditions in CHO cells system and purified through one-step purification with Protein-A affinity chromatography.

We recommended to use TP7 antibody at a  $\geq 1:1$  molar ratio over Taq polymerase.

<b>Product-ID:</b>	RP_SZ_940
<b>Immunogen</b>	recombinant TaqPol expressed in <i>E. coli</i>
<b>Expression System:</b>	Mammalian; CHO
<b>Isotype:</b>	Mouse IgG2a, kappa
<b>Formulation:</b>	Clear Liquid, PBS, pH 7.4, 0.2 $\mu$ m sterile filtered
<b>Concentration:</b>	$\geq 0.5$ mg/ mL
<b>Purity:</b>	$\geq 90\%$ (CGE, reducing conditions) $\leq 10\%$ aggregates (analytical SEC)
<b>Storage:</b>	2 - 8 °C

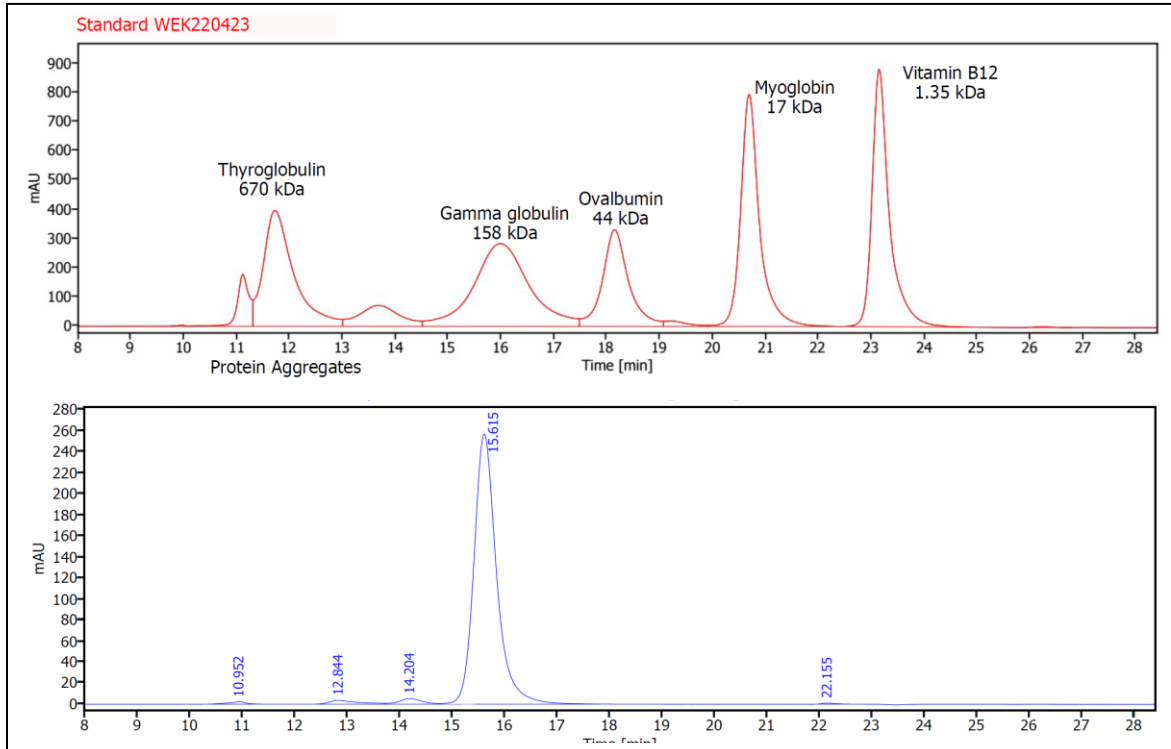
**The product is for research use or for further manufacturing only.**

### Literature:

- [1] A. S. Kaledin, A. G. Sliusarenko, and S. I. Gorodetskiĭ, “[Isolation and properties of DNA polymerase from extreme thermophylic bacteria *Thermus aquaticus* YT-1].,” *Biokhimiia*, vol. 45, no. 4, pp. 644–51, Apr. 1980, [Online]. Available: <http://www.ncbi.nlm.nih.gov/pubmed/7378495>.
- [2] R. K. Saiki *et al.*, “Primer-Directed Enzymatic Amplification of DNA with a Thermostable DNA Polymerase,” *Science (80-. )*, vol. 239, no. 4839, pp. 487–491, Jan. 1988, doi: 10.1126/science.2448875.
- [3] K. Terpe, “Overview of thermostable DNA polymerases for classical PCR applications: From molecular and biochemical fundamentals to commercial systems,” *Appl. Microbiol. Biotechnol.*, vol. 97, no. 24, pp. 10243–10254, 2013, doi: 10.1007/s00253-013-5290-2.
- [4] E. R. Scalice, D. J. Sharkey, and J. L. Daiss, “Monoclonal antibodies prepared against the DNA polymerase from *Thermus aquaticus* are potent inhibitors of enzyme activity,” *J. Immunol. Methods*, vol. 172, no. 2, pp. 147–163, 1994, doi: 10.1016/0022-1759(94)90102-3.

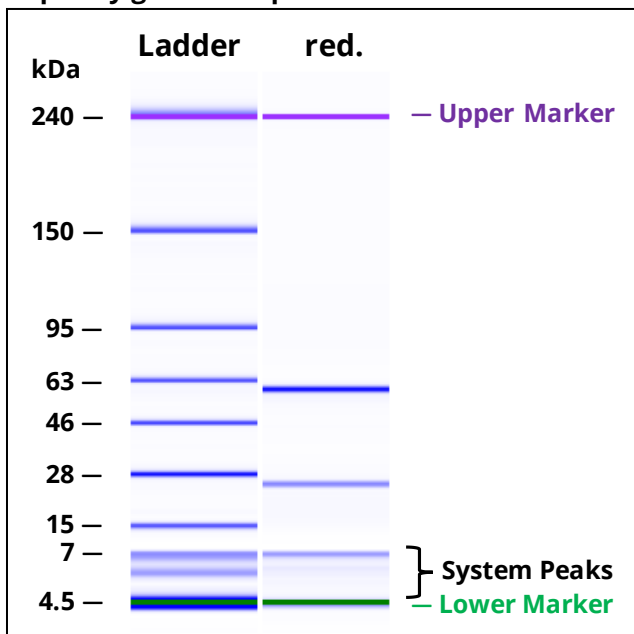
## Taq-Polymerase RecAb (TP7) — Supplementary Data

### Analytical SEC:



Analytical SEC of purified protein (blue) in comparison with gel filtration standard (red).

### Capillary gel electrophoresis:



CGE of the purified protein under reducing (red.) conditions.