

## TG GRA1/p24 (residues 57-149) Toxoplasma Gondii Dense Granule Protein 1 *Toxoplasma gondii*, recombinant, *E. coli*

Cat. No.	Amount
PR-1244-1	1 mg

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -20°C

### Avoid freeze / thaw cycles

### Form

Liquid. Supplied in 50 mM Tris-HCl pH 8.0, 1.5 M urea and 50% glycerol.

### Specificity

Immunoreactive with sera of *T. gondii*-infected individuals.

### Application

Antigen in ELISA and Western blots, excellent antigen for detection of *Toxoplasma gondii* with minimal specificity problems.

### Purity

>95% by SDS-PAGE

### Description

The protein contains the p24 (GRA1) immunodominant regions, amino acids 57-149.

The protein is purified by proprietary chromatographic technique.

### Background

*Toxoplasma gondii* is an obligate intracellular protozoan parasite that infects all warm-blooded animals, including humans, and causes toxoplasmosis.

The GRA1 antigen (p24), a product of *T. gondii*, is a promising vaccine candidate. It is a 23-kDa calcium-binding protein, and induces humoral and cellular immune responses in mice and humans in the chronic phase of the infection. Vaccination with GRA1 has been shown to be protective in two animal models of infection.

### Selected References:

Bivas-Benita *et al.* (2003) Generation of *Toxoplasma gondii* GRA1 protein and DNA vaccine loaded chitosan particles: preparation, characterization, and preliminary *in vivo* studies. *Int. J. Pharm.* **266**:17.

Hiszczynska-Sawicka *et al.* (2003) High yield expression and single-step purification of *Toxoplasma gondii* SAG1, GRA1, and GRA7 antigens in *Escherichia coli*. *Protein Expr. Purif.* **27**:150.

Scorza *et al.* (2003) A GRA1 DNA vaccine primes cytolytic CD8(+) T cells to control acute *Toxoplasma gondii* infection. *Infect. Immun.* **71**:309.

Beghetto *et al.* (2001) Identification of a human immunodominant B-cell epitope within the GRA1 antigen of *Toxoplasma gondii* by phage display of cDNA libraries. *Int. J. Parasitol.* **31**:1659.