

Monoclonal Anti-*Toxoplasma gondii* ROP5 Protein, Clone T5 3E2 (produced *in vitro*)

Catalog No. NR-50266

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Antibody Class: IgG2ak

Mouse monoclonal antibody prepared against the polymorphic rhoptry protein kinase (ROP) 5 of *Toxoplasma gondii*, clone T5 3E2 was purified from the hybridoma supernatant by protein G affinity chromatography. The B cell hybridoma was generated by the fusion of SP2/0 myeloma cells with immunized BALB/c mouse splenocytes. Clone T5 3E2 recognizes the secreted ROP5 pseudokinase¹ that binds to and interferes with host immune response genes, making them susceptible to phosphorylation and permanent inactivation by another kinase, ROP18.^{2,3} ROP5 has also been shown to regulate the catalytic activity of ROP18 by allosteric means and independent of the substrate being phosphorylated in a mouse model.⁴⁻⁶

Material Provided:

Each vial contains approximately 100 µL of purified monoclonal antibody in PBS, pH 7.4. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:

NR-50266 was packaged aseptically in screw-capped plastic vials and is provided frozen on dry ice. The product should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

Functional Activity:

NR-50266 is reported to react with ROP5 and to function in immunoprecipitation, immunofluorescence and immunoblot assays.⁷

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-*Toxoplasma gondii* ROP5 Protein, Clone T5 3E2 (produced *in vitro*), NR-50266.”

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services,

Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Dubremetz, J. F., Personal Communication.
2. Reese, M. L., et al. “Polymorphic Family of Injected Pseudokinases is Paramount in *Toxoplasma* Virulence.” Proc. Natl. Acad. Sci. USA 108 (2011): 9625-9630. PubMed: 21436047.
3. Fleckenstein, M. C., et al. “A *Toxoplasma gondii* Pseudokinase Inhibits Host IRG Resistance Proteins.” PLoS Biol. 10 (2012): e1001358. PubMed: 22802726.
4. Boothroyd, J. C. “Have it Your Way: How Polymorphic, Injected Kinases and Pseudokinases Enable *Toxoplasma* to Subvert Host Defenses.” PLoS Pathog. 4 (2013): e1003296. PubMed: 23633947.
5. Niedelman, W., et al. “The Rhopty Proteins ROP18 and ROP5 Mediate *Toxoplasma gondii* Evasion of the Murine, but not the Human, Interferon-Gamma Response.” PLoS Pathog. 8 (2012): e1002784. PubMed: 22761577.

6. Behnke, M. S., et al. "The Polymorphic Pseudokinase ROP5 Controls Virulence in *Toxoplasma gondii* by Regulating the Active Kinase ROP18." *PLoS Pathog.* 8 (2012): e1002992. PubMed: 23144612.
7. El Hajj, H., et al. "Inverted Topology of *Toxoplasma gondii* ROP5 Protein Provides New Insights into the Association of the ROP2 Protein Family with the Parasitophorous Vacuole Membrane." *Cell. Microbiol.* 9 (2007): 54-64. PubMed: 16879455.

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