MAYO CLINIC LABORATORIES

# Test Definition: TRCNG

Trichinella Antibody, IgG, Serum

## Overview

### Useful For
As an adjunct in the diagnosis of trichinosis

### Method Name
Enzyme-Linked Immunosorbent Assay (ELISA)

### NY State Available
Yes

## Specimen

### Specimen Type
Serum

### Specimen Required
**Collection Container/Tube:**
**Preferred:** Serum gel
**Acceptable:** Red top
**Submission Container/Tube:** Plastic vial
**Specimen Volume:** 0.5 mL
**Collection Instructions:** Centrifuge and aliquot serum into plastic vial.

### Specimen Minimum Volume
0.4 mL

### Reject Due To

| | |
|---|---|
| Gross hemolysis | Reject |
| Gross lipemia | Reject |
| Heat-inactivated | Reject |

### Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---|---|---|---|
| Serum | Frozen (preferred) | 30 days | |
| | Refrigerated | 5 days | |

## Clinical & Interpretive

### Clinical Information

Trichinosis is an infection by the nematode parasite, *Trichinella spiralis*. The infection is acquired by ingestion of larvae in inadequately cooked, contaminated meat, especially pork, bear, and walrus meat. After ingestion, acid-pepsin digestion in the stomach liberates the larvae, which develop into adult worms in the small intestine. After fertilization, the female worm produces larvae that penetrate the mucosa and seed the skeletal muscles via the blood stream. The larvae coil and encyst in muscle fibers, remaining viable for up to several years.

Diarrhea is the most common symptom associated with intestinal infection with adult worms. Fever, periorbital swelling, muscle pain and swelling, pulmonary symptoms, and rash develop during systemic invasion by the larvae.

### Reference Values

Negative
Reference values apply to all ages.

### Interpretation

Positive:
Results are suggestive of current or past infection with *Trichinella spiralis*. Results should be used in conjunction with clinical, epidemiologic and other laboratory tests to diagnose current infection.

Borderline:
Recommend follow-up testing in 10 to 14 days if clinically indicated

Negative:
No antibodies to *Trichinella spiralis* detected. Repeat testing in 2 to 3 weeks if clinically indicated.

### Cautions

Antibodies to *Trichinella spiralis* may not be detectable until 3 weeks after the onset of infection. Therefore, negative results in suspicious cases should be followed by repeat testing in several weeks.

Sensitivity of the test may also be affected by the level of invasive disease, with patients who have lower parasitic loads having a greater risk of being negative by the assay.

Cross reactions with antibodies against *Toxocara canis* are possible.

### Clinical Reference

1. Grove DI: Tissue nematodes. In: Mandell GL, Bennett JE, Dolin R, eds. Principles and Practice of Infectious Diseases. Vol 2. 4th ed. Churchill Livingstone; 1995:2531-2537
2. Pasternack MS: Myositis and myonecrosis. In: Bennett JE, Dolin R, Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9th ed. Elsevier; 2020:1307-1316

## Performance

### Method Description

Microtiter strip wells are precoated with *Trichinella spiralis* ES-antigens (excretory/secretory antigens) to bind corresponding antibodies of the specimen. After washing the wells to remove all unbound sample material horseradish peroxidase-labelled protein A conjugate is added. This conjugate binds to the captured *Trichinella spiralis*-specific antibodies. The immune complex formed by the bound conjugate is visualized by adding tetramethylbenzidine substrate, which gives a blue reaction product. The intensity of this product is proportional to the amount of *Trichinella spiralis* specific antibodies in the specimen. Sulfuric acid is added to stop the reaction. This produces a yellow end point color. Absorbance alternative 450 nm is read using an enzyme-linked immunosorbent assay microwell plate reader.(Package insert: *Trichinella spiralis* ELISA IgG. Gold Standard Diagnostics; 11/02/2021)

### PDF Report

No

### Day(s) Performed

Friday

### Report Available

1 to 7 days

### Specimen Retention Time

14 days

### Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Superior Drive

## Fees & Codes

### Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

### Test Classification

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

### CPT Code Information

86784

### LOINC® Information

| Test ID | Test Order Name | Order LOINC® Value |
|---|---|---|
| TRCNG | Trichinella Ab, IgG, S | 6563-1 |

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# Test Definition: TRCNG

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| Result ID | Test Result Name | Result LOINC® Value |
|---|---|---|
| TRCNG | Trichinella Ab, IgG, S | 19253-4 |