

# Neonatal Toxoplasma gondii IgM FEIA and EIA



*T. gondii* oocysts in a fecal floatation  
(100×)

Enzyme immunoassay for the determination of IgM antibodies to *Toxoplasma gondii* from blood specimens dried on filter paper

- first *Toxoplasma* screening test in the world
- quantitative results
- clinically proven performance
- high sensitivity
- easy adaptation to existing screening systems

# Easy and reliable screening for Congenital Toxoplasmosis

## Congenital Toxoplasmosis

The intracellular protozoan parasite, *Toxoplasma gondii*, causes infection in man as well as in animals. The primary hosts that harbour the intestinal, sexual stage are cats, from which the parasite is spread widely into nature. Transmission to humans occurs mainly by eating raw or rare meat, or by close contact with contaminated material (1).

Congenital toxoplasmosis (CT) is a newborns' disease caused by *Toxoplasma gondii*. This is clinically the most important, and dreaded condition, which is a frequent consequence of primary maternal infection during pregnancy. Vertical transmission rate from the mother with acute acquired toxoplasmosis to the fetus is reported to vary between 20-70% [1].

Majority of the infected infants are asymptomatic at birth but may later develop severe neurological and visual disabilities, which could be prevented if the disease is diagnosed early and appropriately treated.

Because of the nonspecific clinical picture, the diagnosis of a *Toxoplasma* infection must be based on laboratory tests.

Neonatal screening for CT can be easily linked to the existing screening programs for metabolic and endocrine disorders. Generally, neonatal screening for CT meets the requirements set by WHO: the disease is frequent, condition is amenable to treatment, reliable tests for screening and confirmation are available.

## Excellent assay from Ani Labsystems

Ani Labsystems' Neonatal *Toxoplasma gondii* IgM FEIA and EIA kits are intended for the determination of IgM-class antibodies to *Toxoplasma gondii* in blood specimens dried on filter paper. The test is intended as a primary method for screening of newborns for congenital toxoplasmosis (CT).

Because IgM-class antibodies, due to their high molecular weight, do not cross placenta, determination of specific antibodies in newborn specimens taken shortly after birth indicates exposure of the fetus *intra utero* to *Toxoplasma gondii*. Cases showing elevated levels of specific antibodies should be further investigated.

Ani Labsystems' assay is quantitative with 3 dried blood controls and 1 calibrator and compatible with existing Ani Labsystems' neonatal screening system and assays, no additional investment is needed.

## Extensive studies in Brazil

In a 5-year prospective study in Brazil, in which 285,780 neonates were screened with Ani Labsystems' Neonatal *Toxoplasma gondii* IgM FEIA, the prevalence of CT was found to be 1 per 1,867. Of the 195 patients with congenital toxoplasmosis, 138 (70,7%) were asymptomatic until 7 years of age (2).

## Assay procedure

Punch 3 mm sample disks, add 150 µl anti-human IgM antibody

Incubate  
A) 30 min at RT shaking or B) 15 min at RT shaking and O/N at +4 °C

Remove disks, Wash

Add 150 µl antigen-conjugate

Incubate 1 h at RT shaking, Wash

Add 150 µl substrate

Incubate 20 min (EIA) / 30 min (FEIA) at RT shaking

Add 100 µl (EIA) / 50 µl (FEIA) stop solution

Measure at 450 nm (EIA) / ex. 320 nm, em. 405 nm (FEIA)

## References

- 1) Remington J.S., Klein J.O., eds. Infectious diseases of the fetus and newborn infant. 3rd ed. Philadelphia: WB Saunders 1990 pp. 89-195.
- 2) Neto EC et al. Emerg. Inf. Dis. 2004; 10: 1069-73

## Ordering Information

6199 802	Neonatal Toxoplasma gondii IgM FEIA	480 wells	CE
6199804	Neonatal Toxoplasma gondii IgM EIA	480 wells	Coming soon

Grade 903 filter paper is used in all products

