NEOSPOROSIS

Neospora caninum Antibody Test Kit
cELISA

CATALOG NO.
280-2

SPECIES SAMPLE
Bovine

SAMPLE
Serum

SENSITIVITY †
96%

SPECIFICITY †
99%

ASSAY TIME
100 minutes

CONFIGURATION
2 stripwell plates

TESTS
184

CATALOG NO.
280-WASH

120mL of lot-specific 10X Wash Solution Concentrate

† See Sensitivity & Specificity in Perspective on TOC page

VMRD's *Neospora* test is a competitive, enzyme-linked immunosorbent assay (cELISA) that detects antibodies against *Neospora caninum* in cattle sera. Our competitive ELISA format allows other species to be tested, but validation has been completed only on cattle. An immunodominant surface protein of 65 kDa is captured on the antigen plate using a monoclonal antibody. Another HRP-conjugated monoclonal antibody competes with serum antibodies for a specific epitope on p65. Sensitivity and specificity studies confirm the high accuracy of this kit. In a mass screening of 4,323 sera of unknown serologic status, only 5% of sera fell within ±5% of the cut-off value, demonstrating a clear distinction between positive and negative sera (bimodal distribution).

About Neosporosis

Neosporosis has been identified across the world in various species, including dogs, cattle, sheep, goats, and horses. It is caused by *Neospora caninum,* a protozoan parasite closely related to *Toxoplasma gondii.* Although canids have been identified as the definitive host for *N. caninum,* it is not known if there are other definitive hosts. No clinical signs are noted in cows that abort due to *N. caninum* either prior to the abortion or post-abortion. Aborted fetuses are usually autolyzed with no gross lesions and placentas are not retained. Abortions have been diagnosed in both heifers and cows from 3 months gestation to term. A majority (78%) of *N. caninum* abortions occur between 4 and 6 months gestation. This pattern of mid-gestation abortion is distinct from other diagnosed causes of infectious abortion in dairy cattle which tend to occur later in gestation. In dogs, *N. caninum* infection causes neuromuscular paralysis. Identification of carrier animals is based upon detection of specific antibody with serological tests while diagnosis of abortions is based upon microscopic examination of the fetus and immunohistochemistry.

KIT CONTENTS

Component	280-2
A. Antigen-Coated Plates	2 plate
B. Positive Control	3.6 ml
C. Negative Control	3.6 ml
D. 100X Antibody-Peroxidase Conjugate	0.3 ml
E. Conjugate Diluting Buffer	30 ml
F. 10X Wash Solution Concentrate	120 ml
G. Substrate Solution	30 ml
H. Stop Solution	30 ml
Test Kit Insert	

OVERVIEW OF KIT PROCEDURE

1. Transfer 50 µl of samples and controls into wells of the Antigen-Coated Plate
2. Incubate 60 minutes at room temperature
3. Wash 3 times with Wash Solution
4. Add 50 µl of Antibody-Peroxidase Conjugate
5. Incubate 20 minutes at room temperature
6. Wash 3 times with Wash Solution
7. Add 50 µl of Substrate Solution
8. Incubate 20 minutes at room temperature
9. Add 50 µl of Stop Solution
10. Read at 620-650 nm

Formula for calculating % inhibition:
% I = 100 [1-(Sample OD ÷ Negative Control OD)]

Samples producing <30% inhibition are negative. Samples producing ≥30% inhibition are positive.

For the test to be valid, the mean OD of the Negative Control must be ≥0.30 and <2.50. The inhibition of the Positive Control must be ≥30%.