

# COMPARISON OF THREE ANTIGEN PREPARATIONS TO DETECT TRICHINELLOSIS IN LIVE SWINE USING IGG-ELISA

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**Abstract.** A swine infected with *Trichinella spiralis* is a source of transmission to human through consumption of raw or improperly cooked pork. Detection of larvae is suitable for carcasses, so that pigs in households or farms can be examined serologically for trichinellosis. This study compared antigens, crude (CAg), excretory-secretory (ESAg) and surface (SAg), for their potential use in IgG-ELISA. Serum samples were collected from 5 experimentally infected swine with *T. spiralis* (pTs), 147 positive cases of 9 other parasitic infections, 12 mixed infections of other parasites, and 35 normal controls. At the same 100% sensitivity, specificity of tests was in a range of 98-77%. ESAg was the best source of antigen with specificity of 98.3% at cut-off value of 0.439. False positives included coccidiasis (1/86) and mixed infections (2/39). For CAg, trichuriasis (2/11), coccidiasis (5/86), and mixed infections (8/39) gave cross-reactions and some of these samples had OD values far above cut-off value of 0.332. Cross-reactions of SAg were *Oesophagostomum* spp-like GI-nematode infection (1/1), unidentified GI-nematode infections (2/3), trichuriasis (5/11), coccidiasis (29/86) and mixed infections (4/39). Thus, ESAg has the highest potential in serodiagnosis, with antibody to *T. spiralis* in pigs being detected at the earliest 16 day post-infection. However, crude antigen demonstrated a good specificity at 91.8%, and this antigen has a potential to be used as a detection of choice for swine trichinellosis, but the antigen preparation must be improved for higher specificity.

**Key words:** *Trichinella spiralis* muscle larvae, swine trichinellosis, crude and ES antigens, IgG-ELISA

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