

# #19P-18

## Diagnostic kit for detection of Shiga toxin



Shiga toxins (Stx1 and Stx2) are the main virulence component in **Enterohemorrhagic *Escherichia coli* (EHEC)**, a food-borne pathogen that causes diarrhea, hemorrhagic colitis and **Hemolytic-Uremic Syndrome in humans**.

The Pathobiology Institute has achieved the **expression of a highly immunogenic fragment of recombinant Stx2**, producing antisera and antibodies capable of recognizing and neutralizing Stx2 and Stx1. These inputs were the basis to develop an **ELISA kit for in vitro detection of Shiga toxin-producing strains and identify toxin presence in different matrices** (mice, rabbits and hens).

### ADVANTAGES

- Stx2 recombinant fragments specific for production of neutralizing antibodies.
- Stx2 recombinant fragments production is industrially scalable.
- Market diversification of the developed product.

### TECHNOLOGY READINESS LEVEL:

In vitro proof-of-concept tests and production of pilot pre-commercial lots of anti-Stx neutralizing antibodies. Financing is required to conduct scaling and marketing tests.

**INTELLECTUAL PROPERTY RIGHTS STATUS:** Stx recombinant antigen-binding fragment and production of neutralizing antibodies qualify for invention patent protection.

*DNA de Vinculación Tecnológica y Relaciones Institucionales - National Coordination Office for Technological Cooperation and Institutional Relations, INTA . Intellectual Property Department- Technological Antenna*  
*Dr. Mariana Nanni nanni.mariana@inta.gob.ar*



Ministerio de Agricultura,  
Ganadería y Pesca  
**Argentina**