



# #15V-18

## Recombinant mini-antibodies in rabies diagnosis

Detection of the rabies virus was originally performed via histopathological examination of Negri bodies. Later, fluorescent antibodies were used to identify the virus, with 10-20% false positive results. Presently, we use monoclonal antibodies as the detection technology, which requires greater investment to obtain, maintain and scale-up production of the cell line.

Consequently, the INTA Virology Institute has developed two recombinant mini-antibodies that express specific single chain variable fragments (scFv) against rabies virus (RV) glycoprotein (G), to obtain an input that is easily produced and scaled-up to be incorporated in different methodologies for rabies virus detection.

### ADVANTAGES:

- High yield to produce scFv at industrial scale.
- High specificity against rabies virus.
- scFv protein fragment in water-soluble suspension.
- One-step purification.

### TECHNOLOGY READINESS LEVEL:

Recombinant mini-antibodies to detect rabies, expressed in a bacterial system. Optimized process to obtain, extract, and purify with a 7 g/l culture yield. Financing is required for scaling and marketing.

**INTELLECTUAL PROPERTY RIGHTS STATUS:** Recombinant scFv structure in rabies and production and purification process that qualify for an invention patent.

*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.gov.ar](mailto:nanni.mariana@inta.gov.ar)



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