Name of Solution:

Peptide based ETX iELISA for assessing protective antibody titre against enterotoxaemia in goats

Submitter: ICAR

Solution Overview:

This is a peptide-based indirect ELISA (iELISA) designed to analyze and quantify the protective antibody titre against Enterotoxaemia in vaccinated goats. It addresses the challenge of identifying the proper time for booster vaccination to prevent outbreaks and mortality in vaccinated animals.

Key Features & Benefits:

- Capable of analyzing and quantifying protective antibody titre against Enterotoxaemia.
- Helps identify the optimal time for booster vaccination in organized farms.
- Aims to save valuable animals from mortality due to enterotoxaemia.
- Uses an antigenic peptide designed for epsilon toxin, a major constituent of the ET vaccine, as a diagnostic marker.
- Useful in organized farms where mortality can occur in vaccinated animals due to sudden outbreaks.

Where It Works and Where It Can Work:

- **Existing:** Evaluated in assessing antibody titres in vaccinated animals.
- **Potential:** Highly beneficial for organized goat farms, veterinary clinics, and research institutions dealing with enterotoxaemia prevention and vaccine efficacy monitoring.

Evidence & Impact:

- Sensitivity and specificity obtained for ET-indirect ELISA were both 100%.
- 643 animals screened by toxin iELISA and 347 by peptide iELISA.
- Unprotected animals were more prevalent in non-ET vaccinated and field groups compared to vaccinated groups.
- 12 weeks post-vaccination (wpv) ET-vaccinated group had more weakly protected animals compared to 3wpv animals, suggesting quarterly immunization frequency for killed ET vaccine.

Scalability & Adoption Support:

- **Technology-driven:** Requires laboratory facilities equipped for ELISA procedures.
- **Partner-ready:** Collaboration with diagnostic labs and pharmaceutical companies for widespread availability of the diagnostic kit.
- **Adaptable:** Standardized ELISA protocols can be easily replicated in various labs.

Partners & Contact Info: *Who's involved and how to connect? List of key contact and partners + email / phone.*

Contact Info:

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