ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Lumpy Skin Disease virus (LSDV)

□ Cat # LSDV11-S	Rabbit Anti-Lumpy skin disease virus (LSDV) antiserum	**SIZE**: 100 ul
□ Cat # LSDV11-C	Bovine Lumpy Skin Disease Virus (LSDV) control for western blot	**SIZE**: 100 ul

Capripoxviruses (CaPVs) represent one of eight genera within the chordopoxvirus(ChPV) subfamily of the Poxviridae or Neething virus. The capripoxvirus genus is currently comprised of lumpy skin disease virus (LSDV), sheeppox virus (ShPV/SPPV), and goatpox virus (GPV/GTPV)whose natural hosts are goat, sheep, and cattle. The members of Capripoxvirus (sheeppox and goatpox virus) are serologically indistinguishable due to antigen conservation, 97-100% similarity). Therefore the vaccine targeted towards one vaccine strain is believed to protect cattle, sheep and goat. LSD is confined to Africa, while sheep and goat pox are present in Africa north of the equator, and throughout West Asia and India, as far East as China and Bangladesh. Occasionally sheep and goat pox spreads from Turkey into Greece. LSDV is thought to be transmitted primarily by biting insects (vectors). The virus hasbeen found.

LSDV genome (dsDNA ~150kbp) contains 156 ORFs which encodes at least 30 homologues of poxviral proteins known to be structural or involved in virion morphogenesis and assembly. LSDV genes were nearly identical (97 to 100% amino acid identity) to 16 genes previously sequenced from either LSDV or ShPV.LSDV P32 (322-aa; ~32 kDa, putative IMV envelop protein), one of the structural proteins present in all thecapripoxviruses, contains major immunogenic determinants.P32 is an homolog of the vaccinia virus H3L gene. It is important in pathogenicity,diagnosis, prevention and control of capripoxvirus. The virus is present in viremic blood "2-4 days", aborted fetuses, milk, and feces.Skin and lymph nodes biopsies of early lesions can be used for virus isolation, hisopathologic, and electron microscopic studies.

ELISA based detection of LSDV antigen or antibody presence is also used for the identification of the disease. LSDV antigens are identified with direct immuno-fluorescence (IF), virus neutralization (VN) or enzyme-linked immunosorbent assay (ELISA), Western blotting or polymerase chain reaction (PCR) assays.Diagnsotic is also based upon the detection of LSDV speciifc DNA (PCR). However, the presence of serological tests remains the method of choice due to its speeed, efficiency and economy.

Source of Antigen and Antibodies

Antigen	Recombinant purified LSDV protein (LSDV15-R-10; ~328 aa) GST-tag at N-terminal and his-tag fusion protein
Ab Host/type	Rabbit, polyclonal, Unpurified antiserum (cat #LSDV11-S)
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

LSDV11-C Western Blot Control

Lumpy Skin Disease Virus (LSDV) GP is expressed in *E.coli* and purified using proprietary technique (>95%, ~65.4 kDa). Purified **recombinant Lumpy Skin Disease virus for Western blot +ve control (#LSDV11-C)** is supplied in SDS-PAGE sample buffer. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels.

Form & Storage of Antibodies/Protein Control

Antiserum (unpurified)

□ 100ul □ solution □ lyophilized

Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4oC or -20oC.

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

ELISA, Western blot; Cellular Activity

Specificity & Cross-reactivity

Lumpy Skin Disease Virus (LSDV, 328-aa) is conserved in Lumpy Skin Disease Virus (100%), Goatpox virus (97%) and sheeppox virus (97%).

General References: Heine HG, Stevens MP, Foord AJ, Boyle DB (1999) J. Immunol. Methods 227, 187-196.

**This product is for In vitro research use only.*

Related material available from ADI

Catalog# Description

LSDV11-C Bovine Lumpy skin disease virus (LSDV) control for western blot

LSDV11-S Rabbit Anti-Lumpy skin disease virus (LSDV) antiserum

LSDV15-R-10 Recombinant (E.coli) purified Lumpy skin disease virus (LSDV) protein (>95%; 6X His-tag)

RV-500700-01N Bovine Anti-Lumpy skin disease virus (LSDV) negative control serum

RV-500700-01P Bovine Anti-Lumpy skin disease virus (LSDV) positive control serum

RV-500700-1 Bovine Anti-Lumpy skin disease virus (LSDV) IgG ELISA kit, quantitative, 96 tests

RV-500710-1 Sheep/Goat Anti-Lumpy Skin Disease virus (LSDV) IgG ELISA kit, 96 tests

LSDV11-S-antiserum 161212SV

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