Product Specification Sheet

**Recombinant Lumpy Skin Disease Virus protein**

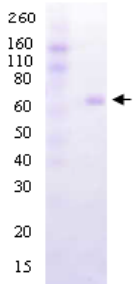
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|---|---|---|
| LSDV15-R-10 | Recombinant (E.coli) Lumpy Skin Disease Virus (LSDV) protein (>95%, his tag) | Size:10 ug |

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 has been 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 the capripoxviruses, 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. Diagnostic is also based upon the detection of LSDV specific DNA (PCR). However, the presence of serological tests remains the method of choice due to its speed, efficiency and economy.

## Source of Antigen




Recombinant Lumpy Skin Disease Virus protein was expressed in E.coli as a GST-tag at N-terminal and his-tag fusion protein (328 aa, >95%, ~65.4 kda). Purified protein is supplied in 50mM Tris-HCl, 0.5 mM EDTA, 5mM β-mercaptoethanol, 0.25M NaCl and 0.25M Imidazole (see lot sp. Conc. on the vial)

It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

## Storage

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term**: at –20C 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, Histochemistry & Immunofluorescence

**Specificity:**
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 |

LSDV15-R-10-Protein 161213SV

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