ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Leptospirosis

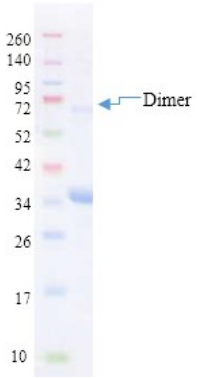
□ Cat.# LIP3211-C	Recombinant (E.coli) Purified Leptospirosis LipL32 protein control for western blot	**SIZE**:100 ul
□ Cat. # LIP3211-S	Rabbit anti-Leptospirosis LipL32 protein antiserum	**SIZE**:100 ul

Leptospira is an obligately aerobic, tightly coiled spirochaete. Leptospirosis is a worldwide zoonotic disease caused by pathogenic Leptospira spp. Infections are typically transmitted to humans through contact with water or soil contaminated with the urine of infected animals. Although sporadic cases of renal and hepatic disease have been reported, the disease has most often been associated with abortion and equine recurrent uveitis in horses Pathogenic Leptospira species are capable of surviving as free-living bacteria for extended periods of time after urinary shedding. Each serotype has one or more (usually only two or three) reservoir hosts which multiply it up and maintain it. A serotype can remain as a life-long infection in its reservoir host.

The pig is a reservoir host for Leptospira pomona, L. tarassovi, L. Bratislava and L. muenchen, the last two being very closely related. It is not a reservoir host for L. icterohaemorrhagiae but it can be infected from rats urine and become ill. It can also become infected by other serotypes from other animals urine, for example L. canicola from dogs and L. hardjo from cattle but the infections are subclinical and do not result in disease. L. pomona causes important reproductive problems in female breeding pigs spreading slowly through the herd. It remains in the herd permanently unless steps are taken to eradicate it.

Currently, the microscopic agglutination test (MAT) is the standard reference method for the serologic diagnosis of Leptospirosis. However, the MAT requires considerable expertise to perform and interpret, and a panel of live strains of all common serovars and locally isolated serovars needs to be maintained, which is challenging. Thus, the MAT is usually restricted to reference laboratories. The current interpretive criterion for the Leptospira MAT for active infection requires a 4-fold rise in titer between acute- and convalescent-phase sera. It is well recognized that seroconversion or increasing antibody titers in paired serum specimens provide strong evidence for true infection, but the samples need to be taken 2 to 3 weeks apart in order to see changes in titer, which is not practical in the clinical setting.

Source of Antigen and Antibodies



Leptospirosis protein was expressed in *E.coli* and purified using a proprietary technique (>95 purity%, His-tag, aa:22-272). **Western blot positive control (#LIP3211-C)** is supplied in SDS-PAGE sample buffer. Store at -20ºC in suitable size aliquots. SDS may crystallize in cold conditions. It should be re-dissolved by warming at 37ºC . The sample should be heated once prior to loading on gels at 95ºC for 5 minutes. LIP3211-C is supplied at a concentration of 20 ng/ul. Use 5-10 ul per well for good visibility.

Form & Storage of Antibodies

Antiserum (unpurified)

□ 100 ul solution □ lyophilized powder

Buffer: PBS pH 7.4 + 0.05% sodium azide

***NOTE:** Further purification can be done using Protein A/G or antigen-affinity purification. Contact ADI if your application requires additional purification.

Storage

Short-term: 4°C for 1 month

Long-term: at –20°C or below in suitable aliquots. Do not expose to multiple free/thaw cycles or store working diluted solutions.

Stability: 2 years at –20ºC or below

Recommended Usage

ELISA: LIP3211-S had a titer of ~20k (A450=1) against LIPl32 coated recombinant protein.

Western blot: 5-10k

*Optimal concentrations must be determined by the user for their specific application. This product may be used for other applications not listed above but have not been tested by ADI.

Specificity & Cross-reactivity

Leptospirosis LIPl32 (aa: 22-272, protein accession # O34094) is 100% conserved in Leptospira interrogans and Leptospira noquchii

General References: Ren SX, Fu G, Jiang XG et al. (2003) Nature 6934, 888-893

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

Related material available from ADI

Catalog#	Description
LIP3215-R-10	Recombinant (E. coli) Leptospira LipL32 protein (122-272 aa; >95%, 6x His-tag)
RB-500630-1	RecomBac Mouse Anti-Leptospira LipL32 IgG ELISA kit, 96 tests, Quantitative
RB-500640-1	RecomBac Human Anti-Leptospira LipL32 IgG ELISA kit, 96 tests, Quantitative

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