ALPHA DIAGNOSTIC INTERNATIONAL

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Product Data Sheet

¾ **Cat # SPL15-R** Recombinant (E. coli) Treponema pallidum antigen (Syphilis, 15kDa), purified
Size: 100 ug

Treponema pallidum is a spirochaete bacterium with subspecies that cause treponemal diseases such as syphilis, bejel, pinta, and yaws. Treponematosis diseases is found in humans and animals. At least four subspecies of Treponema are known:

Treponema pallidum, which causes syphilis
T. p. endemicum, which causes bejel or endemic syphilis
T. p. carateum, which causes pinta
T. p. pertenue, which causes yaws
Treponema subspecies are highly related antigenically and difficult to distinguish.

Syphilis is a sexually transmitted disease caused by the spirochetal bacterium Treponema pallidum subspecies pallidum. The route of transmission of syphilis is almost always through sexual contact, although there are examples of congenital syphilis via transmission from mother to child in utero or at birth. If untreated, the organisms move throughout the body and can cause damage to many organs, making syphilis a life-threatening disease if not treated early enough. Probably the most interesting property of T. pallidum's structure is the endoflagella found in the periplasmic space between its two membranes. These organelles give T. pallidum its distinctive corkscrew motility. The World Health Organization estimates that there are 12 million new cases of syphilis per year.

Rabbit syphilis (Treponema paraluiscuniculi) is a bacterial disease caused by the spirochete Treponema cuniculi. The bacterium is universal and found all over the world. It infests wild and domestic or pet rabbits. The classical form of syphilis affects the junction between the mucosa and the epithelium of genital organs, the anus and/or the face, mainly the eyelids and nostrils. The disease is not zoonotic, and cannot be passed from rabbits to other animals and humans.

The **serological response to syphilis involves production of antibodies** to a wide range of antigens, including non-specific antibodies and specific anti-TP antibodies. The first detectable response to infection is the production of specific anti-treponemal IgM, which can be detected within 4 to 7 days after the chancre appears and until the end of the second week of infection; anti-treponemal IgG appears at about four weeks later. By the time that symptoms develop, most patients have detectable IgG and IgM.

T. p. pallidum has one of the smallest bacterial genomes at 1.14 million base pairs, and has limited metabolic capabilities, reflecting its adaptation through genome reduction to the rich environment of mammalian tissue. The genome consists of a single double stranded circular DNA chromosome 1,138,006 base pairs long. It contains approximately 1,090 genes which encode approximately 1,041 proteins. At least nine T. pallidum polypeptides with apparent molecular masses of **15 (TpN15), 17 (TpN17), 33, 37 (TpN37), 39, 43, 45 (TmpA), 47 (TpN47), and 97 kDa** have been identified as major immunogens and used for diagnostic tests.

Formulation:

Syphilis 15 kDa protein is produced in E. coli and purified (>95%). The protein is supplied in PBS buffer (pH7.5) with 0.05% NaN3. in liquid or lyophilized in the same buffer (see lot specific cocn on the vial). It is recommended to reconstitute the lyophilized protein in sterile water at not less than 100µg/ml, which can then be further diluted to other aqueous solutions. Lyophilized protein although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution, protein should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

References: Baker-Zander SA (1985) J. INf. Immun. Dis. 151, 264-272; Hanff PA (1983) Inf. Immun. 40, 825-828; . 129, 1287-1291; Neal R (1988) Inf. Immun. 56, 71-78

Related items

Catalog#	ProdDescription	Quantity/SIZE
4910	Anti-Tp (Treponema pallidium) Syphilis ELISA kit, Semi-Quantitative	1 kit
4915-R	Anti-Tp (Treponema pallidium) Syphilis rapid tests strips	100 pk
SPL15-R	Recombinant (E. coli) Syphilis antigen (15kDa), purified	100 ug
SPL17-R	Recombinant (E. coli) Syphilis (17kDa), purified	100 ug
SPL15-R	Recombinant (E. coli) Syphilis (47kDa), purified	100 ug

SPL15-R-p15-T-Pallidum-Syphilis 150421A

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