ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Brucella abortus (BP26)

□ Cat. # BP2611-S	Anti-Brucella abortus BP26 protein antiserum	**SIZE**: 100 ul
□ Cat.# BP2611-C	Recombinant Brucella abortus purified BP26 protein control for western blot	**SIZE**: 100 ul

Brucella abortus is an intracellular gram negative rod shaped bacteria originally found in cattle populations. This bacterium is a blood borne pathogen that causes premature abortion of a cattle fetus. Brucella abortus is zoonotic, it can be transferred from an animal to a human host and still remain pathogenic. The average time of Brucella abortus in the excrement of cattle and the aborted fetuses of cattle is around 30 days. This intracellular bacterium can remain alive outside the host without replicating. Outside the host the bacteria cells are affected by direct sunlight; the pathogen can be eliminated by pasteurization, and can be killed by disinfectants. Brucella abortus is usually transmitted in animals by contact with the placenta, fetus, fetal fluids and vaginal discharges from infected animals.

Brucella abortus and other strains of Brucella cause a disease known as brucellosis, which usually affects cows, sheep, goats, pigs, and dogs. Brucellosis causes termination of a cow's pregnancy, due to reproductive complications. This disease used to be referred to as Malta fever in humans. The symptoms in humans include fever, chills, fatigue, headache, backache, weakness, and weight loss.

The Brucella abortus genome contains 2 circular DNA chromosomes. The first chromosome is 2,124,241 nucleotides long and codes for 2200 genes. The second chromosome is 1,162,204 nucleotides long and codes for 1156 genes. Within the coding region GC content is 57% and 81% of the genome is a coding region. The genome of Brucella abortus is very different and rare compared to a lot of other bacteria for it lacks any plasmids or genomic islands which are characteristic of pathogenic microbes. BP26 is a 26-kDa protein (BP26) isolated from a Brucella abortus S19 genome lambda gt11 library. This protein is in the periplasm of B. abortus and in transformed Escherichia coli. It is exported to the periplasm via a preprotein of 29 kDa with a signal sequence of 28 amino acids. The use of this protein in Western blotting allowed the differentiation between vaccinated bovines from infected bovines. BP26 might be of value as an antigen for serological diagnosis of brucellosis in different mammals.

Two Brucella abortus live vaccines, Strain 19 and RB51, are widely used to control this disease in endemic areas, or used as part of an eradication program.

Source of Antigen and Antibodies

Antigen	Recombinant purified BP26 protein ~25.9kDa (229 aa)
Ab Host/type	Rabbit, polyclonal, Unpurified antiserum (**cat # BP2611-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**

BP26 protein is expressed in *E.coli* and purified using proprietary technique (>95%, ~25.9 kDa). Purified **recombinant BP26 for Western blot +ve control (#BP2611-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/Peptide Control

Antiserum (unpurified)

□ 100ul □ □ solution □ lyophilized powder

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

Brucella abortus BP26 protein (229-aa, protein accession # Q44642) is 100% conserved in Brucella abortus and 99% conserved in Brucella inopinata and Brucella melitensis.

General References: Rossetti OL, Arese AI, Boschiroli ML, Cravero SL (1996) J. Clin. Microbiol. 34, 165-169; Crasta OR (2008) PLoS ONE 3, 193.

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

Related material available from ADI

Catalog#	Prod Description
BP2611-C	Recombinant(Brucella abortus) Purified BP26 protein control for western blot
BP2615-R-10	Recombinant Brucella abortus BP26 protein (>95%, 6x His tag)
RV-500400-01N	Recombinant Brucella abortus IgG negative control serum
RV-500400-02P	Recombinant Brucella abortus IgG positive control serum
RV-500400-1	Recombivirus Bovine/Cow Infectious Brucella abortus BP26 Protein IgG ELISA kit, 96 tests

BP2611-S-antiserum 151117C

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