



## *Streptococcus equi* subspecies *equi* PCR

“Strangles” is a contagious bacterial disease of horses caused by *Streptococcus equi* subsp. *equi*. Clinical manifestations include purulent nasal discharge, fever, anorexia and swollen submandibular and retropharyngeal lymph nodes which frequently form abscesses. Diagnosis has traditionally involved culture of nasal swabs, washes or pus aspirated from abscesses. While this is considered the ‘gold standard’ method, detection and confirmation of *S. equi* subsp. *equi* can take several days and identification may be complicated by the presence of other Group C  $\beta$ -haemolytic streptococci such as *S. equi* subsp. *zooepidemicus* and *S. dysgalactiae* subsp. *equisimilis*.

This PCR is a sensitive and rapid test compared to culture; a positive result by PCR will indicate the presence of the *S. equi* subsp. *equi* DNA in the sample (even if the bacteria are dead). Thus the PCR can still detect *S. equi* subsp. *equi* when antibiotic treatment has already commenced and this is particularly important if the culture result is negative. If a PCR positive result is returned, the recommendation is to complete the antibiotic treatment and then re-test two weeks post treatment to confirm clearance of the bacteria. Healthy horses may be tested for the absence of infection. It is important to be aware that even if the nasal samples are shown to be free of infection, the organism may still be present in the guttural pouch.

Although the primary purpose of this assay is to detect *S. equi* subsp. *equi*, the multiplex PCR will also be able to detect the presence of *S. equi* subsp. *zooepidemicus* DNA in the sample and this will be reported.

The *S. equi* subsp. *equi* PCR is not approved for export testing.



Species:  
Equine



Specimen:  
Dry swab or aspirate/  
lavage fluid



Container:  
Sterile pot



Collection Protocol:  
Swab, lavage  
or aspirate the  
nasal, throat or  
nasopharyngeal area,  
or nasopharyngeal  
lavages or aspirates.  
Guttural pouch  
samples are  
recommended for  
detection of persistent  
infections.



Handling/Shipping  
Requirements:  
Samples should be  
held and transported  
chilled - do not freeze.