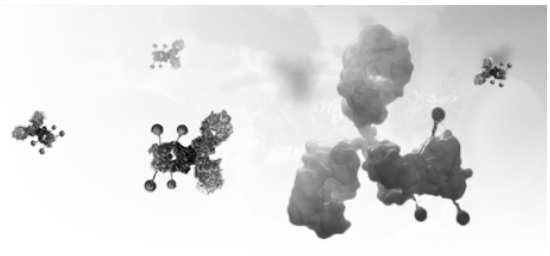

Native Coxsackievirus B1 Antigen (DAG4715)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Coxsackievirus B1 Antigen
Nature	Native
Expression System	N/A
Species	Coxsackievirus
Conjugate	N/A
Applications	ELISA
Procedure	None
Format	Liquid
Size	250 µg; 1 mg
Preservative	None
Storage	Store at -80°C. Avoid repeated freeze-thaw cycles

BACKGROUND

Introduction

Coxsackieviruses A and B, as well as the ECHO viruses, have a worldwide distribution and all belong to the Picornaviridae family, genus Enterovirus. These virus groups are similar in their biological characteristics and epidemiology with a primarily faecal-oral transmission strategy but also being capable of spread via aerosols. Person to person transmission is mainly by smear infection with the portal of entry being either the alimentary canal or the respiratory tract. The viruses reach the reticuloendothelial system and other target organs such as the myocardium, meninges or skin, via the blood circulation. While infections in tropical areas tend to be all year round, in temperate zones infections are at their peak in the summer months and decline in the autumn. Small children are most often infected, however in non-immune older children and adults, infection can lead to severe disease. The incubation time lies anywhere between 12 hours and 35 days. Over 90 % of all Enterovirus infections are asymptomatic or result only in mild, short duration general malaise affecting the upper respiratory tract, such as sore throat with or without rhinitis which is often associated with fever. In adults symptoms may be pharyngitis,

tonsillitis and flu-like symptoms. In particular, ECHO viruses are responsible for epidemics in new born children and babies with rhinitis, pharyngitis, bronchitis and pneumonia in hospitals and other institutions. Coxsackieviruses may cause a panoply of disease conditions, such as vesicular pharyngitis (herpangina) aseptic meningitis, meningoencephalitis, hand, foot and mouth disease, pleurodynia (Bornholm's disease), carditis, maculopapular exanthema, hepatitis, acute haemorrhagic conjunctivitis and foetal damage. Less frequently vesicular exanthema and paralysis may occur. Individuals with congenital or induced immunodeficiency are prone to viral persistence following infection which may lead to chronic diseases such as chronic enteritis, arthritis, CNS disease, recurrent pericarditis or chronic heart disease. Infections with Coxsackieviruses can be confirmed by direct detection of the pathogen or serological evidence of specific antibodies. The PCR is an important complement to the classical methods while in recent years ELISA tests have established themselves. Due to the large number of serotypes a test with broad reactivity is required in order to detect all the various serotypes with one test. The CD ELISA classic Coxsackievirus tests are based on a mixture of recombinant antigens derived from conserved and subtype specific epitopes of the VP1 proteins of Coxsackieviruses B1, B3 and B5. These epitopes have been determined to be sufficiently cross-reactive to enable the detection of infections caused by other Coxsackievirus serotypes. An acute Coxsackievirus infection can be confirmed by the detection of specific IgM and /or IgA antibodies or a rising IgG titer. The highest frequency of IgM positive sera are found in children between the ages of 1 and 10 years. IgM antibodies are usually detectable for a period of 6 to 8 weeks. In rare cases IgM titers may persist up to 6 months after aseptic meningitis or 3 to 6 months following pericarditis. Patients with recurrent pericarditis may have IgM detectable for more than 5 years. IgA detection in cases of acute infection is a valuable supplement to IgM serology. Persistent IgA may be detectable in cases of type 1 diabetes and chronic heart disease for 6 months up to several years.

Keywords Coxsackievirus; Coxsackievirus B1