

Campylobacter Jejuni Antigen

Cat. No. CAM-045 Lot. No. (See product label)

SPECIFICATION

Product Overview

Campylobacter jejuni antigen is a partially purified detergent extract of the membrane fraction. The main component is an outer membrane protein of approximately 45 kDa. It has been manufactured for use in immunoassay development and other research applications.

Background

Campylobacter jejuni is a significant foodborne human pathogen, producing an acute enteritis which is often accompanied by a bacteremia. It is also associated with systemic infections, including meningitis, endocarditis, and septicemia. Components of the bacterial outer membrane (OM) of *C. jejuni* participate in adherence of the pathogen to host cells, invasion of host cells, resistance to the bactericidal activities of serum, resistance to phagocytosis and to phagocytic killing mechanisms, and sequestering of iron. The outer layer of the lipid bilayer also contains lipopolysaccharide (LPS), whose lipid A component contributes the endotoxicity of gram-negative cells.

Outer membranes have been isolated from type strains and wild-type isolates of *C. jejuni* by sodium lauryl sarcosinate extraction and analyzed by SDS-PAGE. The protein profile was shown to be dominated by a major polypeptide band with an apparent molecular weight of 45 kDa. This protein was heat modifiable, and transmembrane by virtue of its peptidoglycan association and surface exposure, suggesting it may be a porin or matrix protein. Surface labeling studies showed significant surface exposure for it, implying it plays an important role in the antigenic makeup of *C. jejuni* (Logan & Trust, 1982). To date, three channel forming proteins have been identified in Campylobacter, namely, the major outer membrane protein (MOMP), Omp50 and CadF (Dhanasekar et al., 2017). Cross-reactivity of cholera

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toxin antibodies with the major outer membrane protein (MOMP/PorA) of *C. jejuni* has also been observed (Albert, 2011). Currently, there are no licensed vaccines against *C. jejuni* and controlling its colonization in chickens is believed to be the best strategy for reducing disease in humans (O'Ryan et al., 2015).

Molecular Mass 45 kDa

Notes This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

ClassID 1 Infectious Disease

GENE INFORMATION

Synonyms Campylobacter Jejuni

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