



Development of a double-antibody sandwich ELISA for rapid detection of *Bacillus Cereus* in food

By *abchain*
Created 2016-03-16 11:08



Development of a double-antibody sandwich ELISA for rapid detection of *Bacillus Cereus* in food [1]



 Wed, 03/16/2016 - 11:08 |  *abchain*

[Previous page](#) ↩

[2]

Bacillus cereus is increasingly recognized as one of the major causes of food poisoning in the industrialized world. In this paper, we describe a sensitive double-antibody sandwich enzyme-linked immunosorbent assay (ELISA) that was developed for rapid detection of *B. cereus* in food to minimize the risk of contamination. The polyclonal antibody (pAb) and monoclonal antibodies (mAbs) specific to *B. cereus* were generated from rabbit antiserum and mouse ascites, respectively, using the octanoic acid/saturated ammonium sulfate precipitation method and protein A-sepharose columns. IgG-isotype mAbs were specially developed to undergo a novel peripheral multiple sites immunization for rapid gain of hybridomas and a subtractive screen was used to eliminate cross reactivity with closely related species such as *Bacillus thuringiensis*, *B. subtilis*, *B. licheniformis* and *B. perfringens*. The linear detection range of the method was approximately 1×10^4 – 2.8×10^6 cells/mL with a detection limit (LOD) of 0.9×10^3 cells/mL. The assay was able to detect *B. cereus* when the samples were prepared in meat with various pathogens. The newly developed analytical method provides a rapid method to sensitively detect *B. cereus* in food specimens.

To read more click [here](#) [3]

 Wed, 03/16/2016 - 11:08 |  *abchain*

[Previous page](#) ↩

[2]

Source

Nature.com

Related Company/Institution:

[4]

Nature Publishing Group

Rate this article

[Nature Scientific Report](#) [3]

Source URL:

http://www.antibodychain.com/antibody_research_development_news/development_double_antibody_sandwich_elisa_rapid_detection_of_baci

Links:

[1]

http://www.antibodychain.com/antibody_research_development_news/development_double_antibody_sandwich_elisa_rapid_detection_of_baci

[2] [http://www.antibodychain.com/javascript:history.go\(-1\)](http://www.antibodychain.com/javascript:history.go(-1))

[3] <http://www.nature.com/articles/srep16092>

[4] <http://www.antibodychain.com/node>