



Anti-B. anthracis Lethal Factor Monoclonal antibody, Clone CAL0106 (DMAB3022)

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

PRODUCT INFORMATION

Product Overview	Monoclonal Antibody to Bacillus anthracis Lethal Factor
Specificity	Lethal factor antigen of Bacillus anthracis. Does not cross-react with protective antigen of B. anthracis, Y. pestis, F. tularensis or T. gondii.
Target	B. anthracis Lethal Factor
Immunogen	Lethal factor antigen of Bacillus anthracis (vaccine strain STI-1)
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	B. anthracis
Clone	CAL0106
Affinity Constant	Not determined
Purification	≥95% pure . Protein G chromatography
Conjugate	Unconjugated
Applications	<p>Suitable for use in ELISA and Western blot. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.</p> <p>Recommended pairs for sandwich immunoassay:</p> <ul style="list-style-type: none"> • Capture DMAB3023

- **Detection**
[DMAB3022](#)

Format	Purified, Liquid
Concentration	2.5mg/ml (OD280nm, E0.1%=1.4)
Size	1 mg
Buffer	PBS, pH 7.4
Preservative	0.1% Sodium Azide
Storage	Store at 2-8°C.

BACKGROUND

Introduction

The protease enzyme Lethal Factor (LF) is one of the three proteins (LF, EF & PA) composing the anthrax toxin produced by *Bacillus anthracis*, a bacteria which can infect many mammalian species and that may be fatal. LF is not toxic by itself, but when associated with Protective Antigen (PA), can then gain entry to cells. Once inside the cell, LF then cleaves the N terminal of most dual specificity mitogen activated protein kinase kinases (MAPKKs or MAP2Ks) (except for MAP2K5). Cleavage invariably occurs within the N terminal proline rich region preceding the kinase domain, thus disrupting a sequence involved in directing specific protein protein interactions necessary for the assembly of signaling complexes. There may be other cytosolic targets of LF involved in cytotoxicity. The proteasome may mediate a toxic process initiated by LF in the cell cytosol involving degradation of unidentified molecules that are essential for macrophage homeostasis. This is an early step in LF intoxication, but it is downstream of the cleavage by LF of MEK1 or other putative substrates.

Keywords

Anthrax lethal factor; Anthrax lethal toxin endopeptidase component; Anthrax LF; bacillus anthracis lethal factor; Lef; LF; Bacillaceae; Bacillus; B. anthracis; Bacillus anthracis