

VacA (b-300): sc-25790

BACKGROUND

Helicobacter pylori is a spiral shaped bacterium that accounts for 80% of stomach ulcers and more than 90% of duodenal ulcers. Infection with *Helicobacter pylori* is also associated with the development of gastric cancer. The vacuolating toxin VacA is a major determinant of *Helicobacter pylori*-associated gastric disease. In non-polarized cells, VacA alters the endocytic pathway, resulting in the release of acid hydrolases and the reduction of both extracellular ligand degradation and antigen processing. The toxin forms transmembrane anion-specific channels and reduces the transepithelial electrical resistance of polarized monolayers. Localization of the VacA channels in acidic intracellular compartments causes osmotic swelling, which, together with membrane fusion, leads to vacuole formation. This protein has recently been shown to be an important antigen in the human immune response to *Helicobacter pylori* infection. Cytotoxin associated gene A, also known as CagA, is closely associated with VacA. CagA induces morphological changes in the host, as well as inducing actin reorganization, variations in the cell cycle and autocrine effects.

REFERENCES

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3. Graham, D.Y. and Yamaoka, Y. 2000. Disease-specific *Helicobacter pylori* virulence factors: the unfulfilled promise. Helicobacter 5: S3-S9; discussion S27-S31.
4. Dundon, W.G., de Bernard, M. and Montecucco, C. 2001. Virulence factors of *Helicobacter pylori*. Int. J. Med. Microbiol. 8: 647-658.
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SOURCE

VacA (b-300) is a rabbit polyclonal antibody raised against amino acids 1011-1310 mapping at the C-terminus of VacA of *Helicobacter pylori* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

VacA (b-300) is recommended for detection of VacA of *H. pylori* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of VacA: 87 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **VacA (5E4): sc-32746**, our highly recommended monoclonal alternative to VacA (b-300).