



## Urease $\beta$ (bH-20): sc-22447

### BACKGROUND

*Helicobacter pylori* is present in the stomachs of at least half of the world's population. Although gastric adenocarcinoma is associated with the presence of *H. pylori* in the stomach, only a small fraction of colonized individuals develop this common malignancy. *H. pylori* urease, an enzyme that generates ammonia and is present within the lamina propria of colonized individuals, binds to class II major histocompatibility complex (MHC) molecules on the surfaces of gastric epithelial cells *in vitro*. In addition, urease, which may be toxic to gastric epithelial cells, may also induce apoptosis. Specifically, urease plays a crucial role in the development of ulcers in the duodenum by accelerating apoptosis in the antral mucosa. Ammonia accelerates TNF $\alpha$  cytokine-induced apoptosis, while ammonia or urease alone are unable to induce apoptosis. Urease exists as two forms, Urease  $\alpha$  (UreA) and Urease  $\beta$  (UreB).

### REFERENCES

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### SOURCE

Urease  $\beta$  (bH-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Urease  $\beta$  of *H. pylori* origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22447 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

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

### APPLICATIONS

Urease  $\beta$  (bH-20) is recommended for detection of Urease  $\beta$  of *H. pylori* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Urease  $\beta$ : 61 kDa.

Positive Controls: *E. coli* extract.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.