

Urease α (B-234): sc-21016

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 α cytokine-induced apoptosis, while ammonia or urease alone are unable to induce apoptosis. Urease exists as two forms, Urease α (UreA) and Urease β (UreB).

REFERENCES

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SOURCE

Urease α (B-234) is a rabbit polyclonal antibody raised against amino acids 3-236 representing full length Urease α of *H. pylori* origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Urease α (B-234) is recommended for detection of Urease α of *H. pylori*, *H. heilmannii*, *H. salmonis*, and to a lesser extent, *H. hepaticus*, *H. mustalae* and *H. bizzozeronii* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

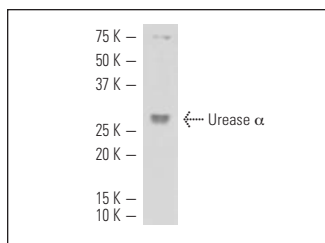
Molecular Weight of Urease α : 26 kDa.

Positive Controls: *E. coli* extract.

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 MarkerTM compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz MarkerTM 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).

DATA



Urease α (FL-238): sc-21016. Western blot analysis of Urease α expression in a 5 μ l sample of *E. coli* extract.

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.