

Anti-Urease alpha subunit [HpU-2] Standard Size Ab00764-23.0

This chimeric rabbit antibody was made using the variable domain sequences of the original Mouse IgG format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Rabbit IgG, Kappa

Clone Number: HpU-2

Alternative Name(s) of Target: urease-alpha; alpha-urease; urease

UniProt Accession Number of Target Protein: P14916

Published Application(s): inhibit, SPR, ELISA

Published Species Reactivity: Helicobacter pylori

Immunogen: HpU-2 was prepared by subcutaneous injection of purified H. pylori urease into BALB/c mice.

Specificity: HpU-2 binds specifically to H. pylori at the epitope with sequence SVELIDIGGNRRIFGFNALVDR - the sequence is part of a loop near to the C-terminus of the alpha subunit of urease (the beta subunit possesses the active site). HpU-18 competes with HpU-2 for binding to this epitope. H. pylori is a gram negative spiral bacterium and causes numerous gastroduodenal diseases. It expresses large amounts of urease when present in the human stomach; urease is key for the survival and pathogenesis of the bacteria as it neutralizes the acidity in the stomach by hydrolysis of urea into ammonia.

Application Notes: HpU-2 results in ~82% inhibition (allosteric inhibition) of urease activity and the inhibitory activity is increased to 87% when HpU-2 is used in combination with HpU-19. HpU-2 has been shown be unsuccessful for use in IHC of formalin-fixed sections of H. pylori-infected human cells. HpU-2 can also be used in SPR and ELISA studies.

Antibody First Published in: Fujii et al. Epitope mapping and features of the epitope for monoclonal antibodies inhibiting enzymatic activity of Helicobacter pylori urease. Biotechnol Bioeng. 2004 May 20;86(4):434-44. [PMID:15112296](#)

Note on publication: Describes the investigation into the inhibitory mechanism of HpU-2 against H. pylori urease. The binding epitope was determined by SPR and molecular modelling.

Product Form

Size: 200 µg Purified antibody.

Purification:

Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.