

Anti-Urease alpha subunit [HpU-2] Standard Size Ab00764-2.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This reformatted mouse 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: Mouse IgG2a, [Fc Silent™](#), 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 to 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.