Datasheet for ABIN622009

Urease Protein (URE)

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Overview

Quantity:	50 mg
Target:	Urease (URE)
Origin:	Microbial
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant

Product Details

Characteristics:	Recombinant Urease
Purity:	> 95.0 % as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Target Details

Target:	Urease (URE)
Alternative Name:	Urease (URE Products)
Background:	Urease (EC 3.5.1.5) is an enzyme that catalyzes the hydrolysis of urea into carbon dioxide and ammonia. The reaction occurs as follows: (NH2)2CO + H2O = CO2 + 2NH3. In 1926 James Sumner showed that urease is a protein. Urease is found in bacteria, yeast and several higher plants. Characteristics: Active site metal: nickel(II), Molecular weight: 480 kDa or 545 kDa for Jack Bean Urease (calculated mass from the amino acid sequence), Optimum pH: 7.4, Optimum Temperature: 60 degrees Celsius, Enzymatic specificity: urea and hydroxyurea, Inhibitors: heavy metals. The multi-subunit enzyme usually has a 3:3 (alpha:beta) stoichiometry with a 2-fold symmetric structure (note that the image above gives the structure of the asymmetric unit, one third of the true biological assembly). An exceptional urease is found in

Target Details

	Helicobacter pylori, which combines four of the regular six subunit enzymes in an overall tetrahedral assembly of 24 subunits (a12b12). This supra-molecular assembly is thought to confer additional stability for the enzyme in this organism, which functions to produce ammonia in order to neutralize gastric acid. The presence of urease is used in the diagnosis of Helicobacter species.

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	Each mg of protein contains 345µg Potassium Phosphate and 25µ g EDTA Na2.It is recommended to reconstitute the lyophilized Urease in sterile 18M -cm H2O.
Storage:	-20 °C