Lysozyme from chicken egg white

Cat. No.: HY-B2237

CAS No.: 12650-88-3

Target: Bacterial

Pathway: Anti-infection

Storage: Protect from light
Powder -80°C 2 years
-20°C 1 year
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)

Lysozyme(chicken egg white)

SOLVENT & SOLUBILITY

In Vitro	H_2O : 10 mg/mL (Need ultrasonic and warming)

BIOLOGICAL ACTIVITY

Description	Lysozyme from chicken egg white is a bactericidal enzyme present in chicken eggs, and it lyses gram-positive bacteria.IC50 & Target: Bacteria[1] ***In Vitro:*** Lysozyme is an ubiquitous enzyme. The hen egg is the most abundant source of lysozyme, which constitutes approximately 3.4% of the albumen proteins. Lysozyme is a natural antimicrobial that hydrolyzes the β(1-4) glycosidic linkage between N-acetylmuramic acid and N-acetylglucosamine found in the peptidoglycan layer of the bacterial cell wall and causing cell lysis. The bactericidal effect of lysozyme is primarily limited to gram-positive bacteria, including pathogens such as Listeria monocytogenes and certain Clostridium species as well as some spoilage organisms, including thermophilic spore-forming bacteria and certain yeasts. The gram-negative bacteria are more resistant to lysozyme action because of their complex cell wall structure[1].
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PROTOCOL

Kinase Assay [1]	For measurement of lytic activity in egg white at each pH, temperature, and CO_2 condition, eggs are randomly selected from a flat of eggs (2 dozen eggs) obtained from a local grocery store. To determine the amount of egg white to be added to obtain a 0.001% lysozyme concentration, it is documented that chicken egg white contains approximately 3.4% lysozyme.

For determining egg white activity, 0.030 g of albumen was added to 100 mL of the buffered solutions. This equated to a concentration of approximately 0.001% lysozyme. In addition, the egg white contains other antimicrobial proteins that are naturally present, as mentioned in the Introduction section[1].

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CUSTOMER VALIDATION

- Appl Surf Sci. 2020, 145332.

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REFERENCES

[1]. Banerjee P, et al. Influence of carbon dioxide on the activity of chicken egg white lysozyme. Poult Sci. 2011 Apr;90(4):889-95.

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