CREATIVE BIOMART®
Assay Kit

Collagen AGEs Assay Kit (CMA-Specific, Glyoxal)

Product Information

Cat.No. Kit-0237

Description

Although carbohydrates are indispensable for ATP production, excess amounts of carbohydrates modify amino residues of amino acids such as lysine and arginine, and results in the irreversible functional disorders of proteins by changing the three-dimensional structure and net negative charge in patients with disordered metabolism. Since this reaction was first reported by Louis Camille Maillard in 1912, the reaction is called the Maillard reaction, or glycation. The Maillard reaction is divided by early and advanced stages. Early stage generates Amadori rearrangement products, such as haemoglobin A1c, whereas advanced stage generates the AGEs (advanced glycation end products), which is characterized by colour in brown and protein cross-linking. Collagen, the structural protein that forms skin, blood vessel wall and bone, also undergo glycation reaction. N epsilon-carboxymethylarginine (CMA), an AGE component was identified in glycated collagen (1), it generates during the reaction of collagen with reducing sugars or glyoxal. AGEs accumulation in collagen induced dermal fibroblasts to undergo apoptosis (2). Because AGEs accumulate in collagen as a function of aging (3), CMA may be involved in aging of collagen-rich tissues such as skin. CML is detected in many proteins such as collagen and albumin, whereas CMA is generates specifically in collagen, suggesting that CMA may provide a marker for collagen glycation. An anti-CMA monoclonal antibody specificallyand sensitively detects CMA in collagen (4). CML ELISA Assay Kit provides rapid detection of CMA formed by glycation with glyoxal on the collagen coating plate. This kit is suitable to the research for functional foods and cosmetic materialswhich have anti-glycation activity.

Storage

4°C

Kit Components

1.96-well Collagen coated plate: One strip-well plate;Microplate seal: 2 sheets;Anti-CML Antibody (100X): 100 uL;Blocking Buffer: 50 mL;HRP Conjugate Secondary Antibody (100X): 100 μL; Sample Dilution Buffer: 30 mL; Washing Buffer (10X): 50 mL; Substrate Solution: 10 mL; Stop Solution: 10 mL;

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Glyoxal Solution 5 mL; Aminoguanidin Solution (10 mM) □ positive control: 250 μL;□ The kit provides sufficient reagents to perform up to 96 assays.

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