

P90190Hu01
Glycated Hemoglobin (HbA1C)
Organism: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES

4th Edition (Revised in August, 2012)

[DESCRIPTION]

Protein Names: Glycated Hemoglobin

Synonyms: HbA1C

Species: Human

Size: 100µg

Source: Human Erythrocytes

[PROPERTIES]

Purity: >80%

Formulation: The HbA1c is supplied in a proprietary buffer formulation having pH 8.0. The HbA1c was dispensed on the basis of HbA1c not total hemoglobin.

Applications: SDS-PAGE; WB; ELISA; IP.

(May be suitable for use in other assays to be determined by the end user.)

[INTRODUCTION]

The HbA1c shows the average amount of glucose in the blood over a period of 3 months. Sugar in the bloodstream can become attached to the hemoglobin in red blood cells (glycosylation). Once the sugar is attached, it stays there for the life of the red blood cell, which is about 120 days. The higher the level of blood sugar, the more sugar attaches to red blood cells. The HbA1c is formed in a non-enzymatic pathway by hemoglobin's standard exposure to elevated plasma levels of glucose. HbA1c is tested to monitor nephropathy and retinopathy in diabetes mellitus.



[PREPARATION]

Reconstitute in sterile PBS, pH7.2-pH7.4

Formation mechanism of HbA1c is similar to advanced glycation end products (AGEs). Its formation is due to the non-enzymatic reaction of reducing carbohydrates with lysine side chains and N-terminal amino groups of macromolecules (amino acids, proteins, phospholipids and nucleic acids) is called the Maillard reaction. The proportion of Hb and glucose is 1: 10, sterilization by Millipore filter, stored in the dark, 37°C incubator 3-6 months until mixtures turns brown-black or darken.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months .

Stability Test: The thermal stability is described by the loss rate of the target protein. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. (Referring from China Biological Products Standard, which was calculated by the Arrhenius equation.) The loss of this protein is less than 5% within the expiration date under appropriate storage condition.

[REFERENCES]

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