

Glycogen Assay Kit | ABL_01913 assay kit

Glycogen Assay Kit (Colorimetric)

CATALOG #
AAA44641

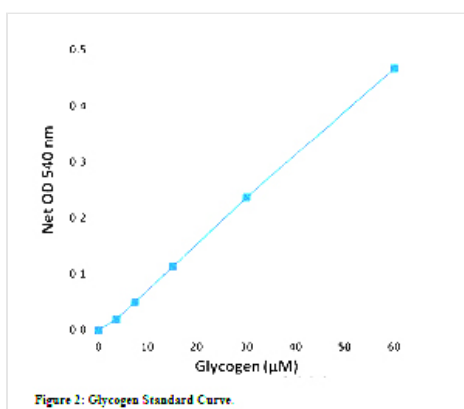
PRODUCT SYNONYMS

Glycogen; Glycogen Assay Kit (Colorimetric); ABL_01913 assay kit

PRODUCT SPECIFICATIONS

Sequence Length	898
Preparation and Storage	Upon receipt, store the Glycogen Standard, Colorimetric Probe, HRP, Amyloglucosidase, and Glucose Oxidase at -20 degree C. The Colorimetric Probe is light sensitive and must be stored accordingly. Avoid multiple freeze/thaw cycles. Store the 10X Assay Buffer at room temperature.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for ABL_01913 assay kit	Principle of the Assay: Glycogen Assay Kit measures total glycogen within biological samples. Glycogen is broken down into glucose monomers by amyloglucosidase first, glucose is then oxidized by glucose oxidase into D-gluconic acid and hydrogen peroxide. The resulting hydrogen peroxide is then detected with a highly specific colorimetric probe. Horseradish peroxidase catalyzes the reaction between the probe and hydrogen peroxide, which bind in a 1:1 ratio. Samples are compared to a known concentration of glycogen standard within the 96-well microtiter plate format. Samples and standards are incubated for 45 minutes and then read with a standard 96-well colorimetric plate reader (Figure 1). Background/Introduction: Glycogen is a polysaccharide found in animals as well as simpler organisms such as fungi. Glycogen is made up of glucose monomers and is considered the primary method of storing glucose in animals. In humans, glycogen is mainly synthesized in the liver (up to 6% of the total mass) and the muscles (approximately 2% of the total mass). Lesser amounts of glycogen are found in the kidneys, glial cells in the brain, and white blood cells. Glycogen also serves as an energy source in the uterus during pregnancy to supply glucose to the fetus. While fats in adipose tissue represent the main stored energy source, glycogen is the second most abundant stored energy source. Glycogen is similar in structure and function to starch, a polysaccharide composed of glucose monomers that also serves as energy storage in plants. Glycogen differs structurally from starch in that it is more extensively branched and compact than starch. Glycogen storage diseases (GSD) are a set of disorders caused by the disruption of glycogen metabolism. Disruption of the liver's ability to supply the rest of the body with glycogen can lead to low blood sugar levels. Additionally, if liver glycogen is not broken down effectively, this can lead to abnormal enlargement of the liver. Glycogen synthase mutations causing impaired protein function causes lower glycogen synthesis and causes the liver to be small. Finally, glycogen brancher deficiency can cause aberrant forms of glycogen to be stored in the liver ultimately causing a disorder of progressive liver dysfunction. Glycogen Assay Kit is a simple colorimetric assay that measures the amount of total glycogen present in biological samples in a 96-well microtiter plate format. Each kit provides sufficient reagents to perform up to 100 assays*, including blanks, glycogen standards, and unknown samples. Sample glycogen concentrations are determined by comparison with a known glycogen standard. The kit has a detection sensitivity limit of 3.8 uM glycogen.
Product Categories/Family for ABL_01913 assay kit	Metabolism Research; Cellular Metabolism; Carbohydrate Metabolism

NCBI AND UNIPROT INFORMATION

NCBI GI #	966768887
Molecular Weight	101,422 Da
NCBI Official Full Name	glycogen
UniProt Protein Name	Glycogen [starch] synthase
UniProt Gene Name	ABL_01913

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/glycogen/44641>