UDP-Azide-Glucose

Catalog No: 55020

Format: 1 vial

Quality Control: 5-Hydroxymethylcytosine (5-hmC) is a DNA modification that results from the enzymatic conversion of 5-methylcytosine (5-mC) into 5-hydroxymethylcytosine by the TET family of cytosine oxygenases. One of the difficulties in studying 5-hmC is the fact that many of the traditional techniques employed to study DNA methylation do not distinguish between 5-mC and 5-hmC residues. In order to overcome some of the challenges with direct discrimination between 5-mC and 5-hmC, a T4 bacteriophage enzyme, β-glucosyltransferase, has been used to modify 5-hydroxymethylcytosine residues. The β-glucosyltransferase enzymes utilizes a UDP-glucose (uridine diphosphoglucose) donor to attach a glucose moiety to 5-hmC which generates glucosyl-hydroxymethylcytosine. With the sugar attached to 5-hmC, the two types of DNA modifications can be discriminated using glucosyl-sensitive restriction enzymes or other techniques.

The UDP-Azide-Glucose contains a reactive group attached to the sugar. This enables the sugar to undergo further chemical modifications following treatment with the β-glucosyltransferase enzyme.

Contents: UDP-Azide-Glucose is provided at a concentration of 3 mM. Each vial contains 65 µl.

Storage and Guarantee: Store at -20°C for up to 6 months. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.