diagenode
Innovating Epigenetic Solutions

GUIDELINES

Sample Submission Guidelines for gDNA for Targeted Methylation Sequencing service

Contact: services@diagenode.com
Website: https://www.diagenode.com/en/p/targeted-dna-methylation-service

1. Isolation of DNA

- The quality of the DNA to be used in Targeted DNA Methylation is very important, we therefore highly recommend the following products for DNA extraction:
  - **Cells, blood and tissue samples**: DNeasy Blood & Tissue Kits (Qiagen)
  - **FFPE samples** : QIAamp DNA FFPE Tissue Kit (Qiagen)
  - **Plasma samples (cfDNA)** : QIAamp MinElute ccfDNA Kit (Qiagen)
- Genomic DNA must be free of protein and RNA. Regardless the choice of DNA extraction protocol, proteinase K digestion is thus mandatory and we recommend to apply a RNAse treatment followed by DNA purification on column (Diapure (Diagenode, C03040001)) (not with beads-based techniques e.g. AMPure beads).
- Do not vortex high molecular weight genomic DNA as this might lead to fragmentation, but mix by pipetting.

2. DNA quantification and preparation

- The concentration of double-stranded DNA must be quantified using a fluorescence-based assay such as Invitrogen's Qubit dsDNA High Sensitivity kit or picogreen based technologies.
  Photospectrometric techniques like Nanodrop cannot be used as they tend to overestimate the concentration of double-stranded genomic DNA.
- We recommend to check for genomic degradation by analysis of a small aliquot of each sample on a 0.8% agarose gel.

We require at least 250 ng of gDNA quantified in a fluorescence-based assay, with concentration higher than 5 ng/µL and the volume higher than 50 µL. Homogenous concentrations between samples are highly appreciated.
Lower amount for gDNA and FFPE can be accepted upon discussion with Service's team.

For Targeted Methylation Analysis on plasma cfDNA, we require at least 20ng of cfDNA quantified in a fluorescence-based assay, with concentration higher than 1 ng/µL and the volume higher than 20 µL.

- Preferably, all samples should be adjusted to a uniform concentration.
- For projects with < 24 samples Prepare the samples in 1.5 mL tubes and label them carefully.
- For projects with ≥ 24 samples, it's mandatory to provide the samples in a 96-wells plate. Carefully identify the position of each sample in the ID sheet.

3. Shipment Instructions

- Always send the samples on dry ice and make sure you supply sufficient dry ice for the whole transport and unexpected delays.

- Fill the **008_xxxx_Sample_cell_tissue_ID** and **008_xxxx_biosafety_form** files with all relevant information and send it by email to services@diagenode.com.

- Print the **008_xxxx_Sample_cell_tissue_ID** and **008_xxxx_biosafety_form** and include it in your package when shipping the samples.

- Attach a Dry Ice Sticker with the net weight (see below) on the outside of the parcel. Please send the parcel at the beginning of the week so it gets to us before the weekend.

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- Please contact your courier (DHL, TNT, Fedex, UPS, etc) to arrange the shipment of the samples to the following address:

Catherine Creppe
Diagenode
Targeted DNA Methylation service
Liège Science Park
Rue du Bois Saint-Jean, 3
4102 Seraing (Ougrée)
Belgium

- Communicate the tracking number to Diagenode (**services@diagenode.com**)