

magtivio
magnetic sample preparation

MagSi-DNA Stool

Isolation of microbiome DNA
from human stool samples

Microbiome DNA isolation from fresh, frozen or stabilized human stool samples

MagSi-DNA Stool - This kit is intended for manual and automated isolation of microbiome DNA (mixture of bacterial/microbial and host DNA) from fresh, frozen or stabilized human stool samples. Processing time for the preparation of 96 samples is about 60 minutes including heat lysis incubations. The obtained DNA can be used directly for downstream applications such as PCR or NGS. Human microbiome analysis is the study of microbial communities found in and on the human body. The goal of human microbiome profiling studies is to understand the role of microbes in health and disease.

General Features

- Short and easy protocols, 96 samples in 60 minutes
- Suitable for fresh, frozen or stabilized stool samples
- Compatible with DNA Genotek's OMNIgene®-GUT collection kit (OM-200)
- Ready-to-use wash buffers, no additional alcohol required
- Consistently high yield and purity of high molecular weight microbiome DNA

Easy to Automate

- Minimal accessory requirements
- PurePrep / KingFisher™ / Biosprint 96 / MagMax™ protocols and consumables available
- Compatible with general liquid handling robots (e.g. Hamilton®, TECAN®)
- Magnetic separators for microtubes and microplates separately available for convenient manual or automated DNA extractions

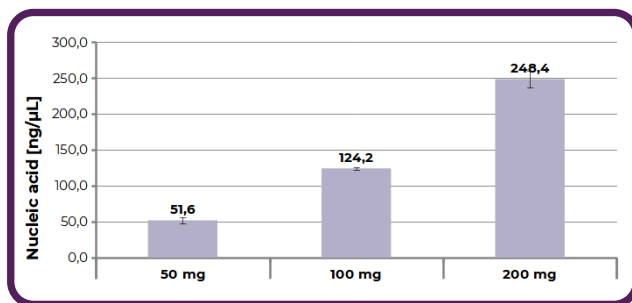


Figure 1. DNA concentrations (NanoDrop) obtained from different FFPE samples (liver, lung, t cells) after extraction vs competitor.

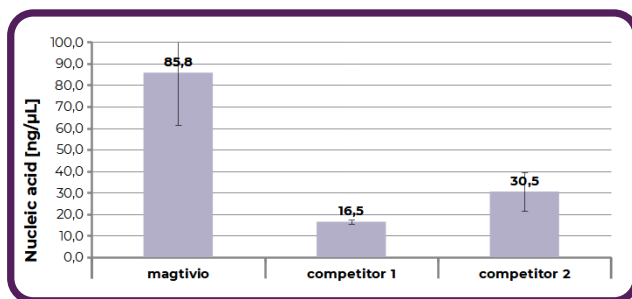


Figure 2. Nucleic acid concentrations (NanoDrop) and electropherogram (TapeStation) obtained from stool stabilized in OMNIgene®-GUT. 200 µL of the preserved stool sample was processed using MagSi-DNA Stool versus two competitor kits. High molecular weight DNA was obtained with the MagSi-DNA Stool kit as demonstrated by analysis of the purified sample with Genomic DNA Screentape on Agilent TapeStation (picture insert, top-right).

Optimised

This kit is optimized for use in isolating total DNA from human stool samples. The MagSi-ST10 magnetic beads are easy to handle and are supplied in a storage buffer for optimized resuspension and minimized sedimentation. Depending on the sample materials RNA may be co-purified.

For efficient lysis of hard-to-lyse bacteria (e.g. gram positive bacteria) mechanical disruption with GP Lysis Tubes is recommended. If the microorganism of interest requires stronger homogenization than provided by a vortex, or if using a bead beater is desired, high-powered bead beating may be used, e.g. with the Geno/Grinder® (SPEX Sample Prep).

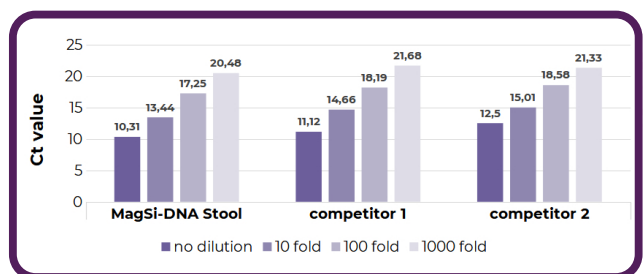


Figure 3. Ct values obtained by qPCR targeting a bacterial 16S rDNA gene on purified DNA obtained from preserved stool samples versus competitor extraction kits. Purified samples were used undiluted and diluted as indicated in the qPCR reaction. No PCR inhibition was observed. Lowest Ct values were obtained with the MagSi-DNA Stool kit, demonstrating the high yield of the recovered DNA.

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| Art. No. | Description | Amount |
|--------------|----------------------------------------|-------------|
| MDKT00230096 | MagSi-DNA Stool | 96 preps |
| MDKT00230960 | MagSi-DNA Stool | 10x96 preps |
| MDKT0023B096 | MagSi-DNA Stool (incl. GP Lysis Tubes) | 96 preps |
| MDKT0023B960 | MagSi-DNA Stool (incl. GP Lysis Tubes) | 10x96 preps |
| MDPL00330100 | MagSi-DNA Stool (incl. GP Lysis Tubes) | 100 pcs |