METHYLDETECT
DNA METHYLATION ASSAYS

# Technical Guide: Controls in Methylation Detection Experiments

## Introduction & Laboratory Practice

Following good laboratory practice, any experiment needs to be properly controlled. In PCR-based methylation screening experiments, two controls are necessary: methylated (positive) and non-methylated (negative).

Those controls are normally chemically modified DNA templates consisting of methylated and non-methylated versions of the locus of interest and serve as reference points for the analyses of an unknown sample.

## Assessing Methylation Status with MS-HRM

In the Methylation-Sensitive High-Resolution Melting (MS-HRM) protocol, the methylation status of a screened sample is assessed by comparing the melting profile of the PCR product amplified from the screened sample (Figure 1 – green) with the melting profiles of PCR products amplified from methylated (Figure 1 – blue) and non-methylated (Figure 1 – red) controls.

In principle:

- **Hypomethylation** is observed if the melting profile of a screened sample does not overlap with the methylation profile of the positive control.

- **Hypermethylation** is observed when the melting profile of the sample does not overlap with the melting profile of a non-methylated control.

**Methyl Detect ApS**
CVR: DK38322761
**Technical Support & Quotes:** info@methyldetect.com www.methyldetect.com
**Document Notice:** Effective as of September 2026. FOR RESEARCH USE ONLY (RUO). Not for use in diagnostic procedures. © 2016-2026 Methyl Detect ApS. All rights reserved.

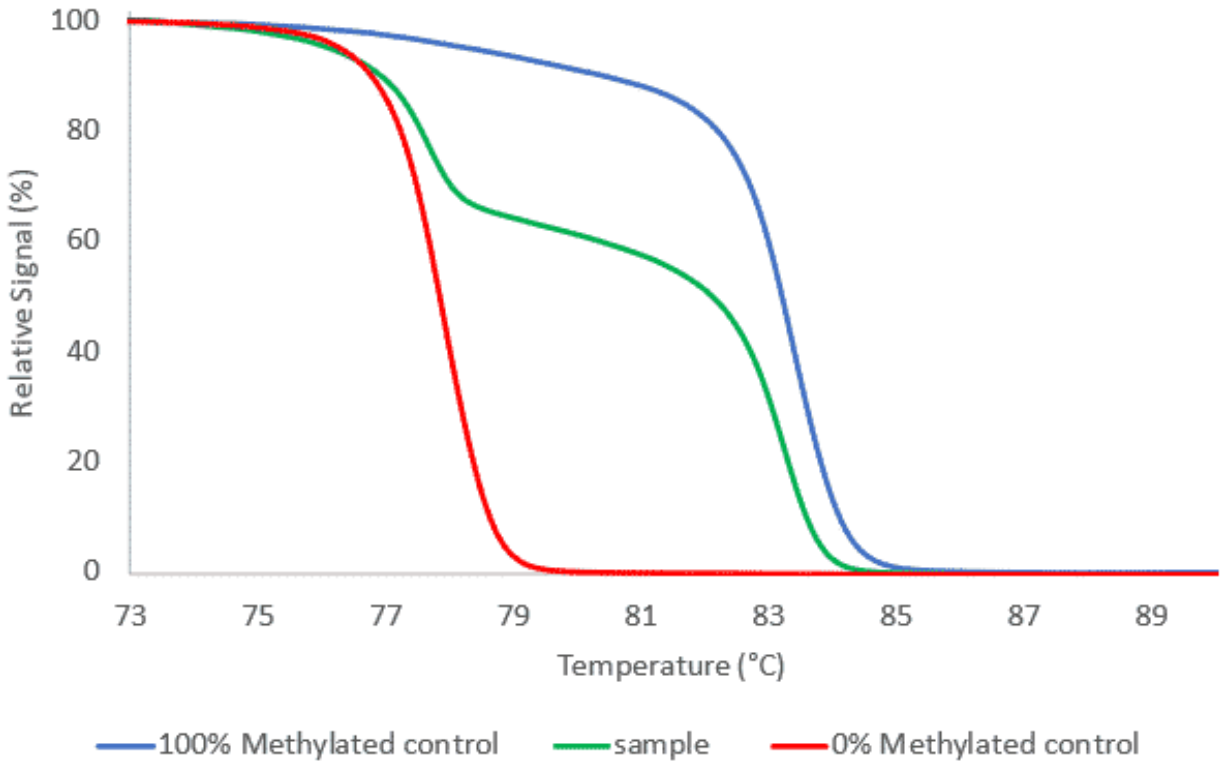


**Figure 1:** Melting curve plot showing the 100% methylated control (blue), the non-methylated 0% control (red), and the screened sample (green).

# Assay Support & Applications

Methyl Detect is dedicated to making MS-HRM technology accessible to clinical and academic researchers worldwide. We offer pre-validated, ready-to-use DNA methylation assays and reagents compatible with standard qPCR equipment.

For technical assistance or to request a quote, contact our team at info@methyldetect.com or visit www.methyldetect.com.


**Document Notice:** Effective as of September 2026. FOR RESEARCH USE ONLY (RUO). Not for use in diagnostic procedures. © 2016-2026 Methyl Detect ApS. All rights reserved.