Assessment of disease risk
by targeted metabolomics

Supplementary data on method for analysis of 3-Hydroxyisobutyrate (3-HIB).

Method based on article
Midttun et al (2016), PMID 27715010.

Material
3-Hydroxyisobutyrate (purity ≥96%) was obtained from Sigma-Aldrich, St.Louis, MO 63103 USA or 89555 Steinheim Germany.
3-Hydroxyisobutyrate-d5 (purity 99+%) was obtained from BUCHEM BW, Minden 60/62 7327 AW Apeldoorn, The Netherlands.

Instrumentation
Agilent 7010B GC/TQ and Agilent 8890 GC System.

Chromatography and detection
GC-MS/MS; positive-ion multiple reaction monitoring (MRM); retention time = 2.98 min.
3-Hydroxyisobutyrate precursor ion = 145.0 m/z; product ion = 69.0 m/z.
3-Hydroxyisobutyrate-d5 precursor ion = 150.0 m/z; product ion = 74.0 m/z.

Method performance
Linear range: 1 - 1000 µmol/L.
Linearity: r2: 0.998.
LOD (S/N >5): 1 µmol/L.
Within-day CV: 2-4 %.
Between-day CV: 3-5 %.