

MACHEREY-NAGEL

Ultra fast lysis and PCR of mouse DNA

Bioanalysis

A photograph showing a white mouse being held gently in a blue nitrile glove. The mouse is facing left, and its tail is visible on the right. The background is a plain, light grey color.

NucleoType Mouse PCR

Save time and money for your mouse genotyping workflow

- DNA preparation within 5 minutes
- Loading dye included for subsequent gel electrophoresis
- Designed for tail, ear, blood and even hair samples

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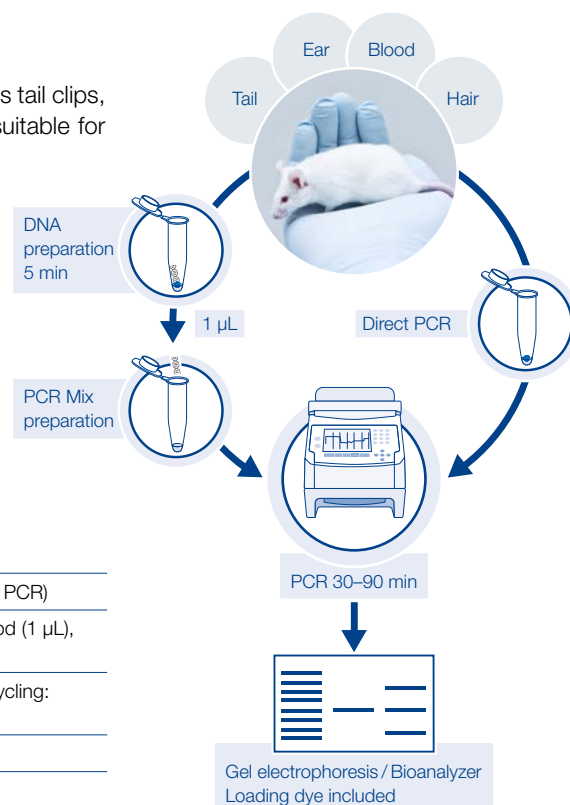
Save time and money for your mouse genotyping workflow

NucleoType Mouse PCR

Designed for rapid mouse typing experiments with common samples such as tail clips, ear punches, and blood. Furthermore, the NucleoType Mouse PCR kit is suitable for animal-friendly hair samples. Animal hair samples can be easily collected causing minimal discomfort to the animal and do not require anesthesia.

Procedure

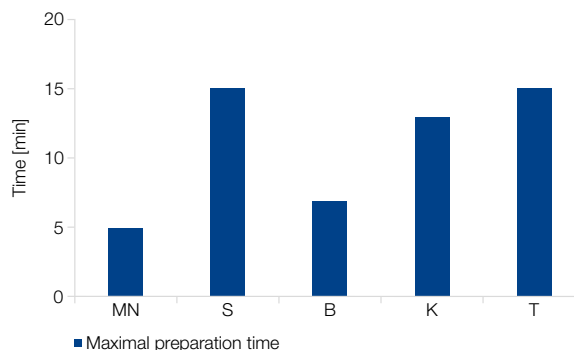
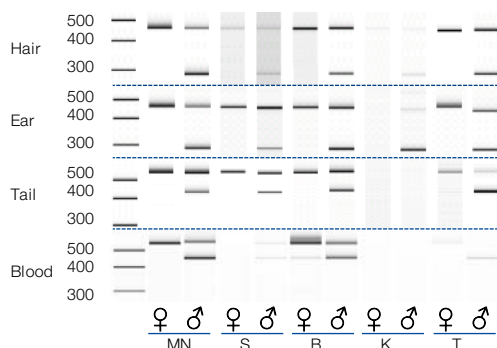
A simple sample preparation in one single tube is combined with a fast PCR. Mouse samples are subjected to a quick lysis at room temperature and Proteinase K inactivation at 98 °C within 5 minutes. An aliquot from the lysate is used as PCR template. The NucleoType HotStart PCR Master mix (2x) enables a fast PCR (30–90 min) and contains a red dye for direct loading onto agarose gels. In addition the NucleoType Mouse PCR kit offers an alternative time-saving direct PCR protocol allowing PCR directly from unpurified and undiluted samples.



Product at a glance

Technology	Simple sample preparation suitable for hot start PCR (optional direct PCR)
Sample material	Mouse tail clipping (1 mm), mouse ear punch (1 mm Ø), mouse blood (1 µL), fur (approx. 3–30 mouse hairs)
Preparation time	Lysis: 2 min (18–25 °C); Enzyme inactivation: 3 min (98 °C); PCR cycling: 30–90 min (cycler and target size dependent)
Amplicon size	Up to 1 kb

Application data



Superior PCR results displaying strong bands within 30 minutes

Mouse EDTA-blood (male/female) purchased from Charles River Laboratories was used and 1 µL was processed according to manufacturer's recommendations. Duplex PCR was performed for mouse genotyping (female ♀ one band/male ♂ two bands). PCR analysis of hair and ear samples was performed by amplification of a 466 bp and 273 bp fragment. Tail and blood samples were analyzed with primers for amplification of a 545 bp and 402 bp fragment. The Bioanalyzer® results demonstrates competitive performance of the NucleoType Mouse PCR kit (MN) in comparison to all other tested kits.

Fast and cost efficient sample preparation

Preparation times were compared between NucleoType Mouse PCR kit (MN) and several competitor kits. The unique lysis buffer of the NucleoType Mouse PCR kit enables template preparation within 5 minutes. An aliquot of this lysate is used as PCR template. Alternatively direct PCR processing in higher PCR volumes is possible.

Ordering information

Product	Specifications	Preps	REF
NucleoType Mouse PCR	NucleoType HotStart PCR Master mix (2x), Lysis Buffer M, Proteinase K	25 / 100 / 500	743200.25 / .100 / .500
NucleoType HotStart PCR Master Mix	NucleoType HotStart PCR Master Mix to be used with NucleoType kits	500 preps	743215
Lysis Buffer M	Lysis Buffer for direct PCR from mice	250 preps	743210.250

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