



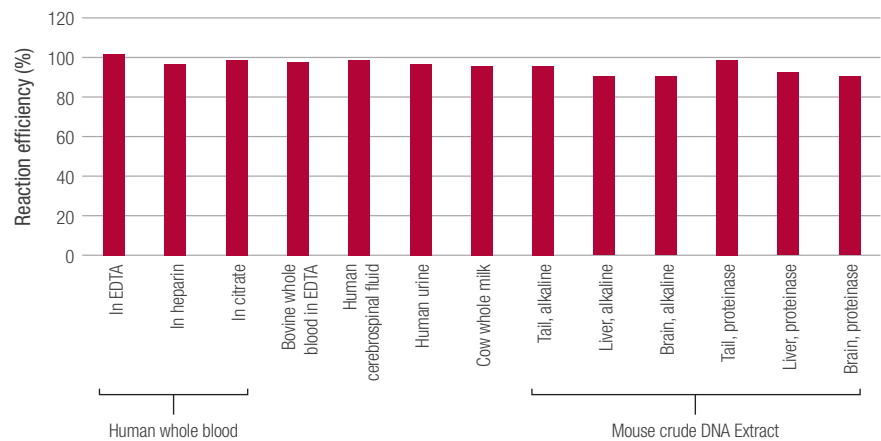
# SensiFAST™ Probe Direct SuperMix

Exceed the limit

**SensiFAST™ Probe Direct SuperMix is a highly inhibitor-resistant qPCR master mix that provides quick and easy extraction and amplification of DNA from a variety of tissue types. The supermix maximizes sensitivity while simultaneously minimizing the effect of blood, tissue and plant PCR inhibitors, to deliver greater experiment success rates.**

- **Robust:** optimized proprietary buffer system designed for overcoming common PCR inhibitors in crude lysate or unprocessed blood, tissue and plant samples
- **Specific:** antibody-mediated hot-start DNA polymerase minimizes non-specific amplification for improved assay sensitivity and reliability
- **Sensitive:** reliable quantification of low abundance targets and scarce samples
- **Reproducible:** consistent results between technical replicates for increased confidence in results
- **Fast:** delivers reproducible, multiplex accurate assay results in as little as 30 minutes

The SensiFAST™ Probe Direct SuperMix is a combination of the latest advances in buffer chemistry and PCR enhancers and stabilizers, together with an antibody-mediated hot-start polymerase, dNTPs and MgCl<sub>2</sub>. It has been designed for highly reproducible, accurate assay results in the presence of inhibitors, making it ideal for direct amplification directly from the most challenging samples. The advanced buffer chemistry and enhancers has been developed for fast qPCR and is designed for superior sensitivity and specificity with probe-detection technology, including TaqMan®, Scorpions® and molecular beacon probes, making SensiFAST Probe Direct SuperMix perfect for multiplexing, allowing more samples to be run in a day with the highest confidence, ideal for high-throughput assays.



**Fig. 1 Efficient amplification from different sample types**

20% (final volume in reaction) samples of human whole blood containing anticoagulants (EDTA, Heparin and Citrate) and bovine whole blood (EDTA), human cerebrospinal fluid, human urine and cow whole milk were analysed using the SensiFAST Probe Direct SuperMix along with 2% alkaline or proteinase K mouse tail, liver and brain crude DNA extracts. The results illustrate that the reaction efficiency of the SensiFAST Probe Direct SuperMix remained within tolerances (90-110%) in the presence of a wide range of common PCR inhibitors.

## APPLICATIONS

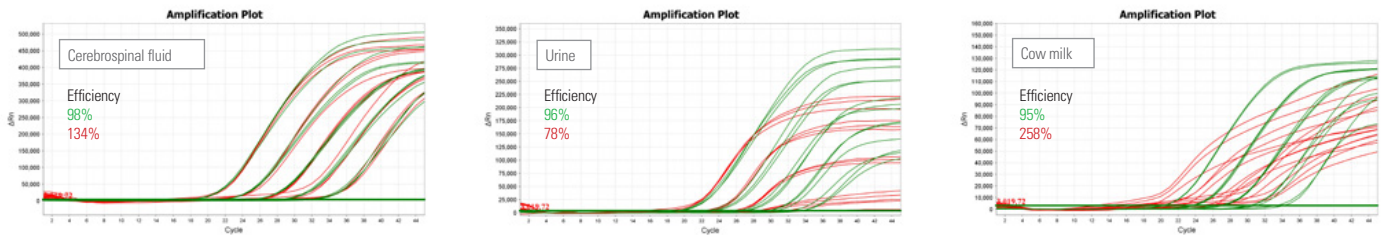
- Gene expression
- Viral and bacterial detection
- GMO testing
- SNP genotyping
- Mutation detection
- Environmental monitoring

## SIMPLE, FAST AMPLIFICATION

SensiFAST Probe Direct SuperMix has been tested with a variety of crude samples known to inhibit PCR, from whole blood to proteinase lysed crude DNA extracts (Fig. 1), making it ideal for everything from biofluids (Fig. 2) to animal (Fig. 3) and environmental samples.

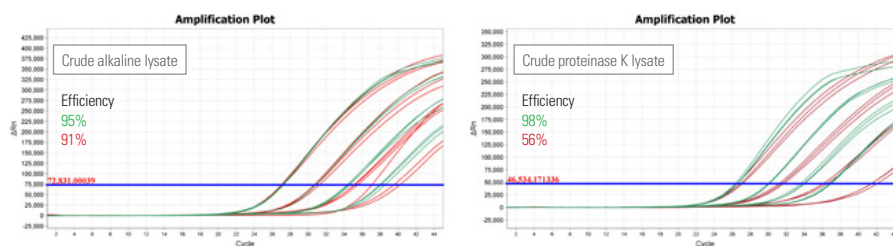
## IDEAL FOR HIGH THROUGHPUT

Eliminating costly, time-consuming, cumbersome purification procedures that can lead to sample loss, not only increase the speed and sensitivity of the assay, but also makes SensiFAST Probe Direct SuperMix especially valuable for high-throughput applications with limited starting material, such as gene expression experiments.



**Fig. 2 Efficient amplification from biofluids**

A 10-fold serial dilution of genomic DNA was spiked into cerebrospinal fluid, human urine and cow whole milk was amplified, using SensiFAST Probe Direct SuperMix (green) and an Inhibitor-Tolerant Mix from supplier K (red) and the manufacturers' recommended protocol. The results illustrate SensiFAST Probe Direct SuperMix is more sensitive than the mix from supplier K, as lower dilutions could be detected, with better efficiencies for all three inhibitor samples.



**Fig. 3 Direct amplification from animal DNA in lysate solutions**

A 10-fold serial dilution of genomic DNA from mouse tail clippings was spiked into alkaline lysis and proteinase K lysate and after neutralization, used with SensiFAST Probe Direct SuperMix (green) and an Inhibitor-Tolerant Mix from supplier K (red) using the manufacturers' recommended protocol. The results illustrate SensiFAST Probe Direct SuperMix is more sensitive than the mix from supplier K, particularly with the proteinase K lysate, as lower dilutions could be detected, with better efficiencies.

## ORDERING INFORMATION

Product	Size	Cat. #
SensiFAST™ Probe Direct SuperMix	500 Reactions	BIO-86105
SensiFAST™ Probe Direct SuperMix	2000 Reactions	BIO-86120

For related products such as cDNA synthesis kits, extraction controls visit [www.bioline.com](http://www.bioline.com).

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