

# CelTaq HS DNA Polymerase

*Hot start DNA Polymerase with enhanced specificity*

## Why choose CelTaq HS DNA polymerase?

- » Reduced non-specific amplification and primer dimers
- » Room temperature reaction set-up with increased yield and specificity
- » Efficient amplification of up to 6kb amplicons
- » Balanced salt solution with proprietary enhancers and stabilizers eliminates the need for buffer optimization
- » Superior performance on high GC/AT templates

*CelTaq HS DNA Polymerase utilizes advanced antibody technology to achieve robust amplification of a wide range of templates with increased specificity, sensitivity and speed.*

## Applications

- » Difficult templates
- » Routine PCR and multiplexing
- » High throughput screening with extended reaction set-up times
- » Low copy template detection
- » TA-cloning
- » Genotyping
- » Colony PCR
- » Direct PCR (urine, blood, bacterial cultures)

## Technical specification

Charateristic	Detail	Charateristic	Detail
Format	Enzyme and buffer separate	Fidelity (vs. Taq DNA polymerase)	1x
Polymerase concentration	5U/μl	Proofreading activity	No
Buffer concentration	5x	Exonuclease activities	5'-3' exonuclease activities
Direct gel-loading	No	Amplicon range	Up to 6kb
Error rate	1 error per 2.0 x 10 <sup>5</sup> nucleotides incorporated	Product 3' ends	A-tailed
Increased specificity	Antibody-mediated hot start	Shelf life	12 months (if stored correctly)

### Contact Details

E: [info@celticmolecular.com](mailto:info@celticmolecular.com) T: +27 21 21 762 7703



CELTIC MOLECULAR

Explore . Discover . Quality

## Description

CelTaq HS DNA Polymerase uses a proprietary antibody-mediated hot start that inhibits enzyme activity at temperatures below 70°C, reducing non-specific amplification and the formation of primer dimers. Upon enzyme activation, the polymerase activity is restored, leading to superior specificity and increased product yield.

This robust enzyme tolerates PCR inhibitors and can successfully amplify targets directly from bacterial culture, urine and blood samples. Use this system under standard and fast cycling conditions to efficiently amplify targets up to 6kb in length.

Complemented by the optimised 5x buffer system (containing dNTPs, MgCl<sub>2</sub>, stabilizers and enhancers), this kit gives consistent, reliable amplification of a broad range of templates (that differ in length and GC content) and does not require additional optimization.

The enzyme is stable at room temperature for 4 weeks without affecting the product performance.



**Fig. 1 High sensitivity and specificity of CelTaq DNA HS Polymerase**

A serial dilution of mouse genomic DNA was used to amplify a 1kb fragment from the GAPDH gene. The amplicons were analysed on a 1% agarose gel. Amplification from CelTaq HS DNA polymerase and the hot-start enzyme from supplier K resulted in equal high amplicon yields and sensitivity.

## Ordering info

Cat. no	Pack size
CM2311-0250	250 units
CM2311-1000	1000 units

More information at

[www.celticmolecular.com/product/celtaq-hs-dna-polymerase/](http://www.celticmolecular.com/product/celtaq-hs-dna-polymerase/)

E: [info@celticmolecular.com](mailto:info@celticmolecular.com) T: +27 21 21 762 7703