

# High Quality PCR Performance

**MolTaq**

DNA Polymerase & Mastermixes



**Molzym**



## MolTaq: Highly Active Taq DNA Polymerase

Molzylm's **MolTaq** is a highly active and robust, genetically engineered Taq polymerase suitable for a broad range of applications, including routine PCR, Real-Time PCR, multiplex PCR, nested PCR and many other issues.

**MolTaq** serves a variety of standard and specialized PCR applications, for instance, SNP analysis, incorporation of modified nucleotides at higher rates, introduction of new restriction sites or site-specific mutations, gene expression studies, food and water quality control and sequencing reactions. In addition, Molzym offers various ready-to-use mastermixes with pre-mixed buffer, dNTPs, 1.5 mM MgSO<sub>4</sub> and optionally a red dye for pipetting control and direct gel loading. Further, for adaptation of Mg<sup>2+</sup> concentration a special **MolTaq basic** is available.

### MolTaq properties:

- 5'-3' polymerase activity for efficient amplification
- 5'-3' exonuclease activity (strand displacement)
- 3' terminal deoxynucleotidyl transferase activity (addition of single dATP to the duplex DNA)
- Incorporation of modified nucleotides at high rates
- Amplification of up to 9 kb from lambda DNA and up to 5 kb from genomic DNA

Each production lot of **MolTaq** products is manufactured under strict quality control management ensuring high and consistent product quality.

## Product Features

- ✓ Extremely active Taq polymerase
- ✓ Ready-to-use mastermixes
- ✓ PCR enhancer for amplification of difficult DNA templates
- ✓ Save pipetting and direct gel loading
- ✓ Batch to batch quality
- ✓ PCR and Real-Time PCR

## MolTaq Products

Kits are available to meet your needs for high performance PCR amplification.

**MolTaq** is the highly processive Taq DNA polymerase kit supplying PCR buffer (1.5 mM MgSO<sub>4</sub>) and PCR enhancer for difficult, GC-rich templates.

**MolTaq basic** enables optimization of PCR amplification by variation of supplied concentrated magnesium (basic buffer and extra 100 mM MgCl<sub>2</sub> solution).

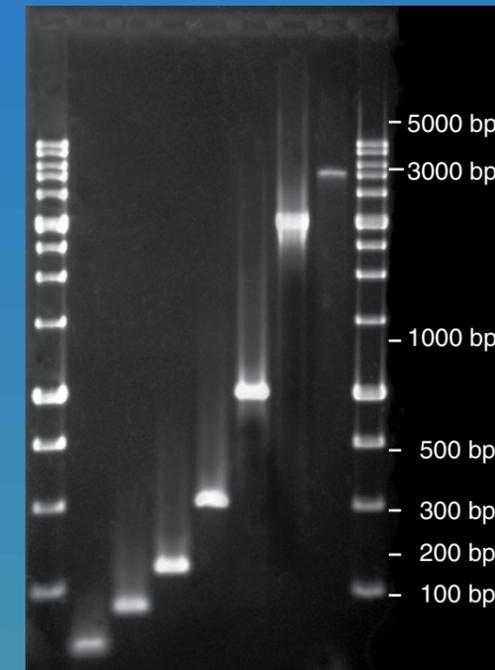
Control of accurate pipetting and direct gel loading for rapid analysis is possible using the red dye supplied with **MolTaq<sup>RED</sup>** and **MolTaq<sup>RED</sup> basic** kits.

### Overview of MolTaq products

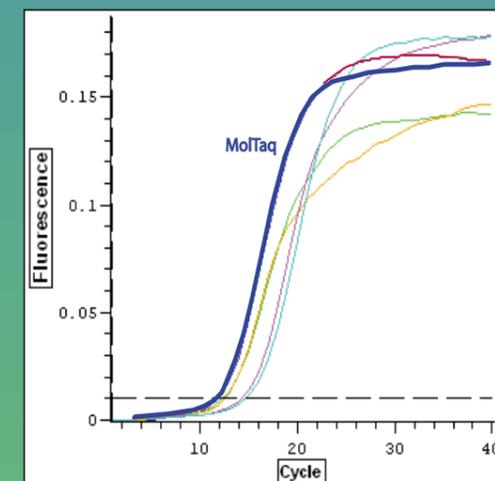
| Content  | MolTaq products |              |                        |                              |
|--|-----------------|--------------|------------------------|------------------------------|
|  | MolTaq          | MolTaq basic | Mol-Taq <sup>RED</sup> | Mol-Taq <sup>RED</sup> basic |
| Taq DNA polymerase   | +               | +            | +                      | +                            |
| PCR buffer (1.5 mM Mg <sup>2+</sup> final concentration)             | +               | -            | +                      | -                            |
| Mg <sup>2+</sup> -free PCR buffer, 100 mM MgCl <sub>2</sub> solution | -               | +            | -                      | +                            |
| PCR enhancer   | +               | +            | +                      | +                            |
| Red dye  | -               | -            | +                      | +                            |

### MolTaq Mastermix

With **MolTaq Mastermix** and **MolTaq<sup>RED</sup> Mastermix**, pre-mixed mastermix components (dNTPs, buffer, 1.5 mM MgSO<sub>4</sub> final concentration), MolTaq and PCR-grade water are supplied as the ideal solution for reduced hands-on time for high performance, routine PCR.



Gel electrophoretic analysis of amplicons of 100 to 5,000 bp fragment size generated with MolTaq Mastermix



Real-Time PCR showing high amplification activity of MolTaq compared to other suppliers of Taq DNA polymerases

## Order Information:

| Product  | Content        | Order No.  |
|--|----------------|------------|
| <b>MolTaq</b><br>Thermostable DNA Polymerase   |                |            |
| <b>MolTaq</b><br>Taq DNA polymerase, buffer (1.5 mM MgSO <sub>4</sub> final), PCR enhancer   | 1000 Units     | P-010-1000 |
|  | 5000 Units     | P-010-5000 |
| <b>MolTaq basic</b><br>Taq DNA polymerase, magnesium-free buffer, 100 mM MgCl <sub>2</sub> , PCR enhancer  | 1000 Units     | P-016-1000 |
|  | 5000 Units     | P-016-5000 |
| <b>MolTaq<sup>RED</sup></b><br>Taq DNA polymerase, buffer (1.5 mM MgSO <sub>4</sub> final), PCR enhancer, red dye  | 1000 Units     | P-040-1000 |
|  | 5000 Units     | P-040-1000 |
| <b>MolTaq<sup>RED</sup> basic</b><br>Taq DNA polymerase, magnesium-free buffer, 100mM MgCl <sub>2</sub> , PCR enhancer, red dye  | 1000 Units     | P-017-1000 |
|  | 5000 Units     | P-017-5000 |
| <b>MolTaq Mastermixes</b><br>Ready-to-use Mastermixes  |                |            |
| <b>MolTaq Mastermix</b><br>2x concentrated mastermix (1.5 mM MgSO <sub>4</sub> final, dNTPs 200 µM each final), MolTaq DNA polymerase, PCR-grade water                     | 250 Reactions  | P-070-0250 |
|  | 1000 Reactions | P-070-1000 |
| <b>MolTaq<sup>RED</sup> Mastermix</b><br>2x concentrated mastermix (1.5 mM MgSO <sub>4</sub> final, dNTPs 200 µM each final), Taq DNA polymerase, PCR-grade water, red dye | 250 Reactions  | P-071-0250 |
|  | 1000 Reactions | P-071-1000 |

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