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DATA SHEET

Version: 3
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1. Identification

Product name **Horse-Power™ Red DNA Polymerase Master Mix 2.5X**
100 rxn

Cat. No **P0027-S**

2. Description

Horse-Power™ Red DNA Polymerase is a ready-to-use 2,5x master mix that contains all PCR reaction components: TruePure™ dNTPs, PCR buffer, Mg^{2+} and Horse-Power Taq DNA polymerase. Only primers and template need to be added.
The mix also contains an agarose loading buffer including a red dye for visual tracking of DNA migration and a dense compound to facilitate the drop-down of the samples into the well agarose gels.

3. Composition

Item	Quantity
Horse-Power™ Red DNA Polymerase Master Mix 2.5X	0.8 mL

Concentration: (2,5X (Buffer Red 2,5X; dNTPs 0,5 mM each; HorsePower Taq DNA polymerase 0,250 U/µL, Glycerol 30%).

4. Features

- Ready-to-use.
- Adds extra nucleotides (preferentially adenine) without template at 3´ends leaving 3´overhangs PCR fragments. This fact allows the popular TA-cloning or GC cloning.
- Both save times in the PCR process and in agarose loading samples.

Quality:

- Functionally tested in PCR.
- Undetected bacterial DNA (by PCR).
- Undetectable nucleases activity (endo-, exo- and ribo-).

5. Storage specifications

Store at -20° C

6. Applications

- Design for medium or high throughput applications (ex. colony screening).
- PCR fragments amplification for TA or GC cloning. (preferably use a proofreading polymerase for cloning purpose and a blunt cloning vector) (see pSpark® DNA Cloning System Cat. No: C0001)

7. Assay conditions

Enzyme activity is assayed in the following mixture: 25mM Tris-HCl pH 9.0 at 25˚C, 50mM KCl, 2mM $MgCl_2$, 0.1mg/mL gelatine, 200 µM de dATP, dGTP, dTTP, 100µM[α32-P]dCTP (0.05µCi/nmol) and 12.5 µg activated salmon sperm DNA.

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8. Recomended PCR Assay (20µL assay)

Red DNA Polymerase Master mix 2.5X	8µl (1X)
Forward Primer (15µM)	1µl (0.75 pmol/µL)
Reverse Primer (15µM)	1µl (0.75 pmol/µL)
Template DNA	plasmide: 30-75ng; gDNA: 100-500ng
PCR grade H20	up to 20 µL

Cycling instructions: 94°C 5:00, 25-30x (94°C 0:35, Tm 0:35, 72°C 1'/kb), 72°C 7:00, 4°C ∞)

*Red dye Agarose Mobility**

Agarose Gel Concentration (%)	Effective separation of: (bp)	Migration Rate (bp)
0,7	800-12000	3000
1,0	400-8000	1500
1,5	200-3000	900
2,0	100-2000	300
3,0	25-1000	> 100

** in TAE Buffer*

9. Further information

Product Use Limitation This product is developed, designed, and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

Disclaimer The information provided in this Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide and should not be taken as a warranty or quality specification. Canvax Reagents S.L.U. shall not be held liable for any damage resulting from handling or from contact with the above product.