EmeraldAmp® MAX HS PCR Master Mix

Code No. RR330Q
Size : 1 ml
(for 40 PCR reactions)

Shipping at − 80℃
Store at − 20℃

Components (for 40 reactions, 50 μl each) :

EmeraldAmp® MAX HS PCR Master Mix (2× Premix)	**1 ml**
dH$_2$O	**1 ml**

Lot No.

Conc. :

Volume :

Description :
EmeraldAmp® MAX HS PCR Master Mix is a 2X premix composed of a high yield hot-start polymerase chain reaction (PCR) enzyme, optimized reaction buffer, dNTPs and a density reagent. The premix also contains a vivid green dye that will separate into blue and yellow dyes when run on an agarose gel. The premix simplifies PCR assembly, so that only primers, template and water need to be added and the resulting product can be run directly on a gel. EmeraldAmp® MAX HS PCR Master Mix also allows amplification of longer products than EmeraldAmp® GT PCR Master Mix.

Shipping : dry ice (-80℃)

Storage : -20℃ (or at 4℃ for 3 months)
If the premix will be used frequently, store at 4℃ , because repeated freeze-thaws of the product will decrease its activity. Mix the premix gently and briefly centrifuge before use.

Applications :
・DNA amplification by PCR.
・Colony PCR

PCR Test :
Premix performance was confirmed by robust amplification of a 15 kb fragment from the human IGF2R gene.

General PCR Mixture (Total 50 μl) :

EmeraldAmp® MAX HS PCR Master Mix (2 × Premix)	25 μl
Template	<500 ng
Forward Primer	0.2 μM (final conc.)
Reverse Primer	0.2 μM (final conc.)
dH$_2$O (Sterilized distilled water)	up to 50 μl

PCR product :
PCR products generated with EmeraldAmp® MAX HS PCR Master Mix possess a single A at 3'-termini, and the obtained PCR product can be directly used for cloning into a T-vector. It is also possible to clone the product into blunt-end vectors after blunting and phosphorylation of the ends.

Dye marker migration :
If 5 μl of the reaction mixture is used for electrophoresis with 1% Agarose L03 (Cat. #5003), the blue dye marker migrates near 3 - 5 kb and the yellow is below 50 bp. Those dyes have absorptions at around 260 nm and 420 nm, respectively. The dyes may be removed by cutting out the gel or extracting DNA by NucleoSpin Extract II, if necessary.

Suggested PCR Conditions :

3 Step (up to 6 kb)

98℃	10 sec	30 cycles
60℃ *	30 sec	
72℃	1 min/kb	

2 Step (over 6 kb)

98℃	10 sec	30 cycles
68℃	1 min/kb	

＊ Primers should have a Tm >60℃ to achieve optimal results. The following formula is commonly used for estimating the Tm of the primers.
Tm(℃) = 2(NA+NT) + 4(NG+NC) -5
N : the number of adenine (A), thymidine (T), guanidine (G), or cytosine (C) bases in primer

Produced by TAKARA BIOTECHNOLOGY (DALIAN) CO., LTD.

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