EmeraldAmp® GT PCR Master Mix

Code No. RR310A Size: 1 ml x 4
(for 160 PCR reactions)

Supplied Reagent:
dH_2O 1 ml x 4

Description :
EmeraldAmp GT PCR Master Mix is a 2X premix composed of a DNA polymerase, optimized reaction buffer, dNTPs, and a density reagent. The premix also contains a vivid green dye that will separate into blue and yellow dye fronts when run on an agarose gel. The premix simplifies PCR assembly; simply add primers, template, and water and start the reaction. After PCR, the reaction mixture can be applied directly to a gel for analysis.

Storage : -20 ℃ (or 4 ℃ for 3 months)
If the premix will be used frequently, store at 4℃ ; repeated freezing and thawing will decrease activity. Mix the premix gently and briefly centrifuge before use.

Applications :
DNA amplification by PCR
Colony PCR
PCR screening

Quality Control Data :
Please see the Certificate of Analysis (CoA) for each lot. You can download the CoA on Takara Bio website.

General PCR Mixture (Total 50 μl) :

EmeraldAmp GT PCR Master Mix (2X Premix)	25 μl
Template	< 500 ng
Forward Primer	0.2 μM (final conc.)
Reverse Primer	0.2 μM (final conc.)
dH_2O	up to 50 μl

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	

＊ For optimal results, primers should have a Tm >60℃ . The following formula is commonly used for estimating the Tm of the primers.

Tm (℃) = [(the number of A and T) x 2] + [(the number of G and C) x 4] - 5

n : the number of adenine (A), thymidine (T), guanidine (G), or cytosine (C) bases in primer

(Note) Denaturation conditions vary depending on the thermal cycler and tubes used for PCR. Denaturation for 5 - 10 sec at 98℃ or 20 - 30 sec at 94℃ is recommended.

PCR product :
PCR products generated with EmeraldAmp GT PCR Master Mix have a single A at the 3'-termini, and PCR products can be directly cloned into a T-vector. It is also possible to clone products into blunt-end vectors after blunting and phosphorylation of the ends.

Dye marker migration :
When 5 μl of the reaction mixture is used for electrophoresis on a 1% Agarose L03 「TAKARA」 (Cat. #5003) gel, the blue dye front migrates near 3 - 5 kb and the yellow dye front is below 50 bp.

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