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5X TUFF TAQ™ QPCR MASTER MIX
PROTOCOL AND TECHNICAL DATA SHEET

5X TUFF TAQ™ QPCR MASTER MIX

Reliable activity even after one month at room tempurature.

KEY FEATURES:

99% active after 1 month at room temperature

>80% active after 3 months at room temperature

Ships at ambient temperature - No dry ice

Freeze/thaw up to 50 times

5x TUFF Taq STABLE™ QPCR Master Mix + ROX is engineered with a proprietary peptide tag that confers extreme stability at room temperature. The 5x mix is optimized for real-time QPCR assays & contains all components required except for template, primers and probe. TUFF Taq STABLE™ DNA Polymerase is activated by a 15 min incubation step at 95°C.

5x MASTER MIX COMPOSITION

- TUFF Taq™ DNA Polymerase
- 5x QPCR buffer
- dNTPs including dTTP to improve sensitivity & efficiency compared to dUTP
- ROX dye
- 15mM MgCl2 (1 x working concentration = 3mM MgCl2)

APPLICATIONS

- Detection & quantification of DNA & cDNA targets
- Gene expression profiling
- Microbial detection
- Viral load determination

SHIPPING & STORAGE CONDITIONS

Shipping and temporary storage for up to 1 month at room temperature has no significant detrimental performance effects

Routine storage: -20°C

Safety warnings: Products and components should be handled only by persons trained in laboratory techniques. Wear suitable protective clothing such as laboratory overalls, gloves and safety glasses. Avoid contact with eyes and skin and wash immediately with water should contact occur.

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RECOMMENDED QPCR REACTION MIX FOR 20 µl

Component	Volume	Final Conc
5x TUFF Taq™ QPCR Master Mix	4µl	1x
Forward Primer (10 pmol / µl)	0.4-0.8 µl	200-400 nM
Reverse Primer (10 pmol / µl)	0.4-0.8 µl	200-400 nM
Probe	1 µl	100-250 nM
DNA Template	1-5 µl	1-50 ng / µl
PCR Grade H2O	Up to 20 µl	
Total	**20 µl**	

RECOMMENDED QPCR CYCLING CONDITIONS

Cycle Step	Temperature	Time	# Cycles
Initial denaturation	**95°C**	**15 min**	**1**
Denaturation	95°C	15-20 sec	40
Annealing/Elongation	60°C	60 sec	

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