



Rebel BioScience

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

# 5X TUFF TAQ™ SUPERGREEN QPCR MASTER MIX

Reliable activity even after one month at room temperature.



## 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™ SUPERGREEN QPCR Master Mix 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 for QPCR except for template and primers. 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
- 5x SUPERGREEN dye
- 15mM MgCl<sub>2</sub> (1 x working concentration = 3mM MgCl<sub>2</sub>)

## 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.

**Usage restrictions:** For Research Use Only. Not for any animal or human therapeutic or diagnostic use. Some potential applications may require a license which is not provided by purchase of this product and users should obtain the license if required. Rebel Bioscience products may not be re-sold, transferred, modified or used to manufacture commercial products without written approval from Rebel BioScience, LLC.

## RECOMMENDED QPCR REACTION MIX FOR 20 µl

Component	Volume	Final Conc
5x TUFF Taq™ QPCR Master Mix	4µl	1x
Forward Primer (10 pmol / µl)	0.16-0.5 µl	80-250 nM
Reverse Primer (10 pmol / µl)	0.16-0.5 µl	80-250 nM
DNA Template	1-5 µl	1-50 ng / µl
PCR Grade H <sub>2</sub> O	Up to 20 µl	
<b>Total</b>	<b>20 µl</b>	

## RECOMMENDED QPCR CYCLING CONDITIONS

Cycle Step	Temperature	Time	# Cycles
<b>Initial denaturation</b>	<b>95°C</b>	<b>15 min</b>	<b>1</b>
Denaturation	95°C	15 sec	40
Annealing/Elongation	60°C - 65°C	20 sec	
Elongation	72°C	20 sec	