

# **BIOCHEMAZONE BROCHURE**

One Step  
**RT PCR Mix**



# About Us

**Br**Chemazone is an evolving biotech company providing highly purified proteins worldwide which serve the research community with cytokine-related products for cancer, apoptosis, development, endocrinology, immunology, neuroscience, proteases, and stem cell research.

Among our proteins are Interferons, Interleukins, Bone Morphogenic Proteins, Tumor Necrosis factors, Leptins, Stem Cell factors, Prolactins, Chemokines, ELISA kits, Antibodies, Peptides, Enzymes, Viral Antigens, various growth factors such as: Platelet Derived, Epidermal, Insulin Like, Nerve, Connective Tissue, Vascular Endothelial, Fibroblast, PCR Master Mix, One Step RT PCR Mix and more....

Our research team and scientists have been able to assemble more than 6000 recombinant proteins, peptides and antibodies for your research needs. The proteins are rigorously tested to meet the research and development demand for excellent quality, uncompromising biological activity at competitive prices.

**Br**Chemazone has established sterling reputation among the scientific community, a reputation built on innovative products, customer service and attention to detail. Our reputation for quality is an essential factor in achieving a favorable position in the market place and the benefits associated with manufacturing top quality products.

# One Step HotStartRT-PCR Kit with ROX (OSH)

## Product Information

One Step HotStartRT-PCR Kit with ROX is designed for one-step qPCR using probes detection. Optimized buffer system in the kit allows simple preparation of the reaction with minimal risk of contamination and plays key role in improving the reaction efficiency. Reverse transcription and quantitative PCR, both are carried out in one step, in a single tube. The reaction tube is closed in the process to avoid contamination and experimental efficiency. Evident enhanced transcriptase activity is present in the kit for efficient transcription. Improved hot start polymerase enables highly efficient, specific amplification and detection and reduces the presence of undesired products and primer dimers due to non-specific DNA amplification at room (or colder) temperatures. The kit components are compatible with real time PCR system and can be monitored directly without need for gel electrophoresis. OSH RT-PCR, One Step Kit is highly sensitive, suitable for detecting small amount of RNA such as viral, SARS-CoV-2/Covid-19 virus by showing strong fluorescent signal. Using this product, viral RNA samples can be easily processed and amplified for quicker results by demonstrating highly specific, accurate, repeatable results in a good linear dynamic range which can help in timely clinical interventions.



## Kit Components (for 100 reactions; 50 µl reaction system)

|                                  |            |                                    |            |
|----------------------------------|------------|------------------------------------|------------|
| ■ Hot start Taq (5 U/µl)         | 100ul      | ■ ROX Reference Dye I (50X conc.)  | 100ul      |
| ■ 2X One Step RT-PCR Buffer Plus | 800 µl x 3 | ■ ROX Reference Dye II (50X conc.) | 100ul      |
| ■ RT enzyme Mix Super Plus       | 100ul      | ■ Rnase Free dH2O                  | 1.0 ml x 2 |

## Key points to remember before using kit

- The product has pre-mixed dNTP Mixture, Mg<sup>2+</sup>, RNase Inhibitor and ROX Reference Dye.
- PCR primers for amplification are not included and will be required separately.
- Only gene specific primers can be used for reverse transcription.
- Avoid using random primers.
- Mix thoroughly all the reagents on thermal cooler or on ice packs for setting up PCR reaction.
- RT enzyme Mix Super Plus & Hot start Taq must be spin down before pipetting and mixed gently to avoid bubbles.
- If precipitate appears in 2X One Step RT-PCR Buffer Plus, vortex the same to dissolve it's components before use.

## RT-PCR Reagent mixing protocol

| Reagent                        | Volume                                      | Final Conc. |
|--------------------------------|---------------------------------------------|-------------|
| 2X One Step RT-PCR Buffer Plus | 2.5 µl                                      | 1X          |
| Hot start Taq                  | 0.1 µl                                      |             |
| RT enzyme Mix Super Plus       | 0.1 µl                                      |             |
| PCR Forward Primer (10 µM)     | 0.1 µl optimal 0.2 µM (0.1-1µM can be used) |             |
| PCR Reverse Primer (10 µM)     | 0.1 µl optimal 0.2 µM (0.1-1µM can be used) |             |
| Probe                          | 0.2 µl                                      |             |
| RNA Template                   | 0.5 µl                                      |             |
| RNase Free Water               | 1.4 ML                                      |             |
| <b>Total</b>                   | <b>5 µl</b>                                 |             |

The actual protocol should be improved and optimized based on the template, primer structure and the size of the targets.

## Operational protocol

| Steps                          | Temperature | Time   |
|--------------------------------|-------------|--------|
| 2X One Step RT-PCR Buffer Plus | 45°C        | 5 min  |
| Hot start Taq                  | 95°C        | 10 sec |
| RT enzyme Mix Super Plus       | 60°C        | 20 sec |

## Important Instructions

- Kit components must be stored at -20°C. Avoid repeated freezing and thawing, if used frequently store at 2-8°C.
- The hot start polymerase in this product doesnot require any activation by denaturation at 95°C for 5-10 min.
- If the experimental results are not good, step PCR amplification might be considered. The annealing temperature should be set as 56°C ~64°C as a reference range.
- Longer heat treatments may deactivate the enzyme.

# CONTACT US



38 Truesdale Cres, Guelph,  
Ontario, Canada N1G 5H3



+1-3658887013



[www.biochemazone.com](http://www.biochemazone.com)



[info@biochemazone.com](mailto:info@biochemazone.com)