

Product Numbers:

RT-qPCR-50, RT-qPCR-200,
RT-qPCR-50s, RT-qPCR-200s



OneStep 2X RT-qPCR Master Mix:

Description:

Virostem™ OneStep 2X RT-qPCR Master Mix is specially formulated for high-efficiency and fast **reverse-transcription based quantitative-PCR (RT-qPCR)** reactions. Our proprietary master mix contains Taq polymerase and MMLV enzymes, enhancer and stabilizer proteins, and other additives for highly specific and robust one-step amplification of RNA.

Compatibility:

Virostem™ OneStep 2X RT-qPCR Master Mix is compatible with RNA samples isolated with standard column or precipitation-based purification kits and rapid nucleic acid extraction buffers such as VTMs/VNATs.

For rapid nucleic acid extractions, we recommend using our specially formulated, nanodrop compatible Virolyse™ Cell Lysis Buffer (VLB-01), which is directly compatible with all Virostem PCR Master Mix products and can be used for one-step extraction of DNA, RNA and proteins directly from cells, saliva, nasal and nasopharyngeal samples in 10 minutes at room temperature and allows rapid cell to Ct detection of DNA and RNA.

Versatility:

Our concentrated 2X formulation is highly flexible and provides 7.5µl of additional volume (in 15µl reactions) which can be used by the end-user for addition of primers, template and PCR dyes such as SYBR® and EvaGreen® or probes. Our unique buffer composition also enables highly specific amplifications without the need for extensive MgCl₂ optimization.

Note: Virostem™ products are sold for research purposes only and Virostem Biotechnology™ is not responsible for their use in other third-party applications.

Protocol:

Master Mix contains additives that stabilize and enhance our enzymes and can be used for both short (20mins) or long (<3hrs) PCR applications. Suggested reaction and cycling conditions are:

OneStep 2X RT-qPCR Master Mix	7.5µl	12.5µl
Primers	200nM-500nM each	
Dyes and probes	-OneStep 2X RT-qPCR Master Mix (SYBR) already contains reporter dye -For probe-based applications primer/probe ratio should be determined by the user	
Template	-10-100ng for RNA -1µl from Virolyse™ Cell Lysis Buffer	
Molecular grade water	complete to 15µl	complete to 25µl
Final Volume:	15µl	25µl

Note: Virostem PCR kits are provided for 15µl reaction volumes.

45°C	10 minutes	40 cycles
95°C	2 minutes	
95°C	10 seconds	
T _m	10 seconds	

Note: Cycling conditions and efficiency should be optimized by the user for peak performance. Primer T_m should be calculated based on qPCR/Onestep calculators. All Virostem™ PCR Master Mix products are stable for up to 12 months at -20°C. Avoid excessive (>5) freeze-thaw cycles for better performance and aliquot if necessary.