DATA QUALITY SHEET

GENECRAFT®

GeneScriptPlus™ Reverse Transcriptase

FOR RESEARCH USE ONLY
Cat. GC-066-500, GC-066-1000, GC-066-10000, GC-066-5000, GC-066-50000

DESCRIPTION	GeneScriptPlus™ Reverse Transcriptase is an optimized mutant of GeneScript™ Reverse Transcriptase that is active at 55°C and has a half-life of 15 minutes, providing increased specificity with Gene-Specific Primers (GSPs) and the highest cDNA yield of all RTs. It is ideal for RT-PCR of a specific gene or generating cDNA from total or poly (A)+ RNA sample. It synthesizes a complementary DNA strand from single-stranded RNA or DNA. GeneScriptPlus™ is genetically engineered by the introduction of point mutations that reduce RNase activity and increase thermal stability. The structural modifications provide: • Full activity at 55°C for increased specificity with GSP • Ability to increase RT units without inhibiting subsequent PCR
CONCENTRATION	200 units/µl.
UNIT DEFINITION	One unit is defined as the amount of enzyme that incorporates 1 nmol of dTTP into acid insoluble form in 10 minutes at 37ºC using poly(rA)-oligo(dt) 10-20 as template primer.
STORAGE BUFFER	50 mM Tris-HCl pH 8.3, 1 mM EDTA, 0.1 mM DTT, 0.1 mM NaCl, 0.1% Triton X-100, 50% glycerol (v/v)
STORAGE TEMPERATURE	Store GeneScriptPlus™ Reverse Trancsiptase below 0ºC, preferably at -20ºC, in a constant temperature freezer
5x REACTION BUFFER	250 mM Tris-HCl pH 8.3, 15 mM MgCl2, 400 mM KCl, 2mM MnCl2, 10mMDTT
UNIT ASSAY CONDITIONS	20 mM Tris-HCl pH 8.0, 2 mM MnCl2, 100 mM KCl, 10 mM DTT, 0.6 mM poly rA, 0.1 mM poly(dT)10-20, 0.5 mM dTTP(3H) – 0.5-5 units of enzyme
QUALITY ASSURANCE	GeneScriptPlus™ Reverse Trancsiptase is tested for its ability to synthesize full length cDNA from 4kb RNA