

Active Recombinant HIV-1 RT

Cat. No. RT-89H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant HIV-1 Reverse Transcriptase was expressed in E. coli.
Species	HIV
Source	E.coli
Description	A Reverse transcriptase (RT) is an enzyme used to generate complementary DNA (cDNA) from an RNA template, a process termed reverse transcription. It is mainly associated with retroviruses. It should be noted however that also non-retroviruses use RT (for example, the hepatitis B virus, a member of the Hepadnaviridae, which are DsDNA-RT viruses, while retroviruses are ssRNA viruses). RT inhibitors are widely used as antiretroviral drugs. RT activities are also associated with the replication of chromosome ends (telomerase) and some mobile genetic elements (retrotransposons).
Form	50% glycerol, 40 mM Tris-HCl (pH8.3), 50 mM NaCl, 5 mM MgCl ₂ , 0.1% Triton X-100, 1 mM DTT
Bio-activity	5,000 units/ml
Molecular Mass	It is composed of two subunits whose molecular weights are 66 kD and 51 kD, same as the those of the enzyme purified from AIDS virus particles.
Purity	Over 90% by SDS-PAGE (CBB staining)

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Applications

1) It is extremely effective for screening new specific inhibitors for HIV virus as a drug for treating AIDS.2) Generally, Gag and Env proteins are employed as antigens for detecting anti-HIV-1 antibody. However, by using this enzyme in combination as an antigen, the detection will be more sensitive.3) Reverse transcriptases are used in the first step of RT-PCR reaction for converting RNA to DNA. The HIV-1 reverse transcriptase can also be applied for RT-PCR method.4) Standards for SDS-PAGE, Western blotting, Dot blotting, ELISA

Storage

Store at -20°C

Concentration

0.5 mg/ml as measured by BCA method

Storage Buffer

50 mM Tris-HCl (pH 8.3), 10 mM MgCl₂, 50mM KCl, 3 mM DTT, 0.1% Nonidet P-40, 20 ug/ml poly(rA)-oligo(dT)₁₂₋₁₈, 0.5 mM dTTP ([³H]dTTP, ~1 x 10⁵ cpm), and 10-50 units/ml reverse transcriptase.

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