

RetroSys™ Reverse Transcriptase Activity Kit Colorimetric

Introduction

Reverse transcriptase (RT) is a RNA-directed DNA polymerase of immense importance in the life cycle of retroviruses. They have their genetic material in form of RNA and upon infection, the viral enzyme reverse transcriptase use the RNA as template for the synthesis of complementary DNA – a necessary step for the completion of the virus infection. Assays for reverse transcriptase activity have been broadly used for monitoring retroviral propagation in cell cultures. RetroSys™ is a product line for measuring RT activity from various types of retroviruses.

Applications

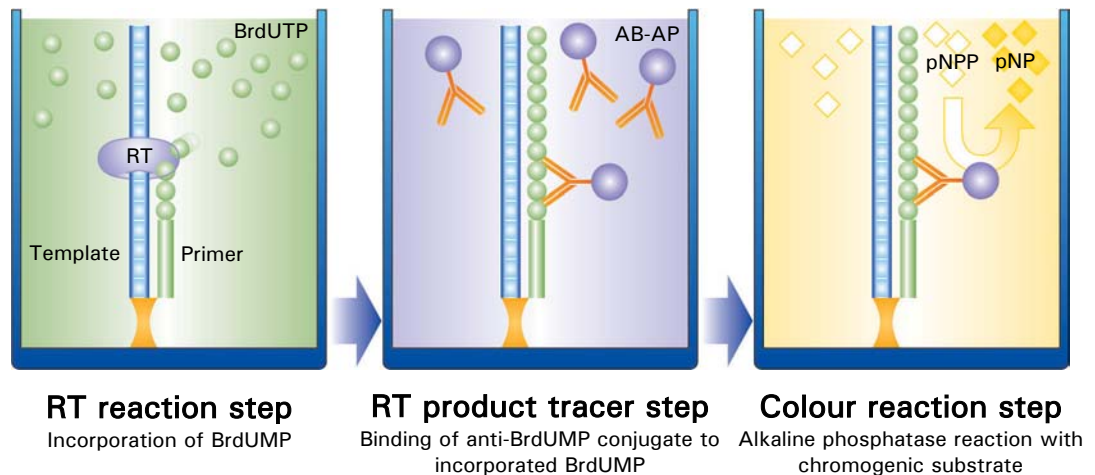
RetroSys™ RT Activity Kit is optimised for the quantitative determination of HIV RT activity in cell culture supernatants and other biological samples. It could also be used for *in vitro* screening for, and characterisation of RT inhibitors.

Samples

Cell culture supernatants or extracts, virus isolates, recombinant RT from all subtypes of HIV-1, HIV-2, SIV, FIV, EIAV and visna.

For research use only

Assay principle



RT reaction step: If reverse transcriptase is present in the sample, PolyA which is bound to the surface of the microtiter plate wells, will serve as template and oligo-dT as primer for the synthesis of a complementary DNA strand. A base analogue to dTTP, Bromo-deoxyuridine triphosphate (BrdUTP) will be incorporated in the growing DNA strand. **RT product tracer step:** A monoclonal antibody, specific to BrdU and conjugated to the enzyme Alkaline Phosphatase, binds to the newly synthesised DNA strand. **Colour reaction step:** The Alkaline Phosphatase acts on the chromogenic substrate pNPP and the increase of absorbance at 405 nm is measured with a spectrophotometer.

Kit content

2 PolyA plates (2 x 96 wells, strip format)
RT reaction components with reconstitution buffer
Sample dilution buffer
HIV-1 RT standard (recombinant)

Concentrated washing buffer
RT product tracer
AP substrate tablets with buffer
Plastic lids and adhesive tape

