HIV-1 Drug Resistance
Genotype Assay
Cenetron Code 2501

Description:	Transmission of drug-resistant HIV-1 variants and the emergence of resistant variants in patients treated with highly active anti-retroviral therapy (HAART) have become pressing clinical challenges. Several studies have demonstrated the clinical utility of HIV-1 drug resistance genotyping in the selection and modification of anti-retroviral therapies.
Clinical Utility:	♦ Selecting initial anti-retroviral regimen in treatment naïve patients. ♦ Monitoring prevalence of drug resistance in specific populations. ♦ Modifying therapy in patients with increasing viral loads. ♦ Selection of anti-retroviral regimens for pregnant women.
Assay Days:	HIV Genotyping samples will be batched on Wednesdays for processing. Turnaround time: one week.
Technical Information:	Cenetron uses CLIP™ technology, a DNA sequencing technology that allows the direct sequencing of very small quantities of HIV-1 derived template. Approximately 1000 bases that include the protease and reverse transcriptase genes are sequenced in two directions to provide the highest degree of accuracy. Once a particular sequence is determined, it is compared to a computer database that contains clinically relevant mutations, and a pattern of drug resistance can be deduced.
Specimen Requirements:	Required volume: 2.5mL of plasma (EDTA). ♦ Plasma must be removed from cells within six hours of collection. ♦ Centrifuge blood specimen tubes at 800-1600G for 20 minutes at room temperature. ♦ Optimal storage and transport of plasma specimens is frozen (-20 to -80°C), but specimens are stable at room temperature for up to one day, or for five days at 2 to 8°C. ♦ Patient's name, I.D. or birthdate, and date of sample acquisition must be marked on tube.
References:	Hirsch, M.S., et al., Anti-Retroviral Drug Resistance Testing in Adults with HIV Infection. JAMA 279: 1984-1991 Durant, J., Drug-Resistance Genotyping in HIV-1 Therapy: The VIRADAPT Randomised Controlled Trial. Lancet 353: 2195-2199.