Cell Death Study Kit

The Cellular DNA Fragmentation enzyme-linked immunosorbent assay can be used to investigate two common types of cell death. In apoptosis studies, it determines the number of BrdU-labeled fragments in the cytoplasm of affected cells. In cell-mediated toxicity studies, it measures the BrdU-labeled DNA fragments that damaged cells release into the culture supernatant. The simple protocol takes 20 hours less than 51Cr-release assays, without the hazards of radioactive assays. Boehminger Mannheim Circle 140.

Quartz Microplates

Quartz microplates offer advantages over standard molded plastic, especially with processes involving aggressive chemicals (acids, alkalis, and solvents) and heat. The plates allow measurements to be taken at wavelengths in the ultraviolet region and can be used with inverted microscopes because they meet high optical standards. Hellma Cells. Circle 141.

Nucleic Acid Hybridization

Dynabeads M-280 Streptavidin allows for the efficient coupling of biotinylated nucleic acids for complex hybridization reactions. DNA or RNA bound to the Dynabeads either as a probe or target can be hybridized directly with complementary DNA (cDNA) or RNA sequences in free solution. Sequences of cDNA from long regions of the human genome have been enriched 80,000-fold with this method. For a direct hybridization reaction, biotinylated DNA or RNA is immobilized onto the Dynabeads through the high affinity biotin-streptavidin linkage. The resulting magnetic DNA or RNA affinity beads bind the target with a kinetics similar to that of DNA in free solution.

For indirect hybridization, the Dynabeads M-280 Streptavidin is added directly to the hybridization solution containing the biotinylated probe and target DNA or RNA sequences. Magnetic separation and elution of target nucleic acids is completed in minutes. Dynal. Circle 142.

RNA Isolator

Using RNA Isolator, researchers can obtain purified RNA in less than 1 hour. RNA Isolator comes premixed and can be used to isolate RNA from a wide variety of cells or tissues of human, animal, plant, yeast, or bacterial origin. The patent-pending formulation contains guanidinium thiocyanate and phenol in a monophasic solution. When added to the sample, it lyses cells, denatures proteins, and solubilizes RNA and DNA simultaneously. The addition of chloroform leads to a biphasic solution. The RNA is partitioned to the aqueous phase, and DNA and proteins remain in the organic phenol/chloroform phase. The purified RNA can then be precipitated with isopropanol. If desired, DNA and proteins can be isolated by precipitation from the organic layer. Genosys Biotechnologies. Circle 143.

Electroporation System

The ECM 600 Electroporation System is for transfecting or transforming cells by rendering a membrane transiently permeable so foreign genes, drugs, or other large molecules can be introduced into the cell by means of pulsed electric fields. The system features the technical advantages of two voltage ranges (2.5 kV and 500 V) for a variety of applications, an additive capacitor bank, resistance timing, and instantaneous monitoring, all within a single unit. The user can switch between electroporation of prokaryotic and eukaryotic cells with the turn of a knob. BTX. Circle 144.

Mutagenesis Kit

The Chameleon double-stranded, site-directed mutagenesis kit allows single- and multiple-base substitution, insertion, and deletion mutations in virtually any double-stranded plasmid, eliminating the need for laborious subcloning steps. The kit's enhanced site-elimination mutagenesis procedure overcomes the limitations of other methods by introducing a new mutated host strain that removes an endonuclease that degrades miniprep DNA, greatly improving the yield and quality of mutated plasmid DNA. Stratagene. Circle 145.

Infrared Microanalysis System

IRus infrared microanalytical system combines advanced optical microscopy and infrared spectroscopy with Windows-based software. The system allows the user to determine the chemical and molecular properties of a wide variety of organic and inorganic materials. Users can analyze samples as small as the diffraction limit allows (typically 10 μm). The system can be used for analyzing the chemical structure of multilayer films, pharmaceuticals, contaminants, biological samples, forensic evidence, and surface coatings. Spectra-Tech. Circle 146.

Literature

More than a Microplate Reader is the title of a six-page brochure featuring technical and product information on the SPECTRAMAX 250 Microplate Spectrophotometer. The brochure explains the features that allow users to perform a wide variety of assays. Molecular Devices. Circle 147.

TechNotes is a free newsletter for molecular biologists. Each 16-page issue features two or three technical articles and information on new product releases. Recent articles have dealt with such topics as increasing DNA probe sensitivity, ribonuclease protection for the detection and quantitation of mRNA, quantitating chloramphenicol acetyltransferase expression through mRNA detection, and the simultaneous isolation of RNA and DNA from samples. Ambion. Circle 148.

Groclyt is an electronic database of information on the structure, function, and physiology of growth factors and cytokines. Ludwng Institute for Cancer Research. Circle 149.

PRODUCTS & MATERIALS

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