

Cas 9 Nuclease

XactEdit Cas9 Nuclease with Nuclear Localization Signal is a highly active, purified recombinant *Streptococcus pyogenes* Cas9 protein that mediates site-specific double-stranded DNA cleavage when complexed with a guide RNA (gRNA). The introduction of Cas9/gRNA ribonucleoprotein (RNP) complexes into cells creates double-stranded DNA breaks, which have been used for a variety of targeted genome-editing studies, such as homologous knockin and gene knockout. Available as a kit or a standalone enzyme (1 mg/mL or 10 mg/mL), XactEdit Cas9 delivers consistent and robust performance. With no detectable nonspecific nuclease activity and low endotoxin levels, this nuclease is ideal for in vitro assays or for introduction into cells by electroporation or transfection. Unlike vector or messenger RNA-based Cas9 systems, the XactEdit Cas9 RNP complex does not require transcription or translation and can act immediately after entering a cell.

SGI DNA

For info: 855-474-4362
<https://sgidna.com>

Organoid Culture Reagents

A new R-Spondin1 cell line provides labs a cost-effective solution for obtaining a long-term supply of R-Spondin1 (RSPO1)—a critical ingredient used in the maintenance and proliferation of mouse and human organoid progenitor stem cells. R-Spondins positively regulate Wnt/beta-catenin signaling, most probably by acting as a ligand for LGR4-6 receptors and an inhibitor for ZNRF3. AMS Biotechnology's (AMSBIO's) 293T cell line is stably transfected to express murine RSPO1 with an N-terminal hemagglutinin epitope tag and fused to a C-terminal murine IgG2a Fc fragment. This cell line can be used to produce either purified RSPO1- or RSPO1-conditioned media. The murine RSPO1 protein from this cell line has been demonstrated to lower the cost of organoid culture and to maintain Lgr5+ stem cells. AMSBIO has also introduced a new organoid harvesting solution that separates intact organoids from extracellular proteins in the hydrogel for passaging, cryopreservation, biochemical analysis, and the facilitation of patient-derived xenograft models.

AMS Biotechnology

For info: +44-(0)-1235-828200
www.amsbio.com



Multi-Imaging System

The ChemoLum multi-imaging system has been upgraded to include a new high-quality f0.95 lens, enabling the system's size to be reduced.

This improved lens specification makes the ChemoLum much easier to fit on any bench space and further guarantees superb image quality. The ChemoLum C1R features a 16-bit CCD camera with 8.3 megapixels; the large pixel size of 5.4 $\mu\text{m} \times 5.4 \mu\text{m}$ ensures high sensitivity. Several binning levels are possible, which further increase the C1R's sensitivity and allow it to quickly capture images of any faint blot. The extended cooling to $\Delta T = -40^\circ\text{C}$ ensures noise-free images at all exposure settings. There are four presets for different sample sizes. In addition, the system software controls a five-position motorized filter wheel to ensure the correct selection for each application.

HeroLab

For info: +44-(0)-1223-515440
www.herolab.de

Vitrification Media

Irvine Scientific, a world leader in the development and manufacture of assisted reproductive technologies, is the first company to receive FDA 510(k) clearance for expanded use of Vit Kit vitrification media to include human oocytes. Vit Kit-Freeze and Vit Kit-Thaw are now intended for worldwide use with oocytes (metaphase II), pronuclear zygotes through day 3 cleavage-stage embryos, and blastocyst-stage embryos. Vitrification is a cryopreservation technique that provides excellent survivability of embryos and oocytes through dehydration and ultrarapid cooling. This process eliminates the concerns of damaging ice crystal formation associated with traditional slow freezing. Egg freezing offers women the choice to preserve healthy eggs before undergoing cancer treatment, chemotherapy, or radiation therapy, all of which compromise ovarian function and egg viability. Age negatively impacts a woman's egg supply in both quality and quantity, so freezing eggs while young is also an option for those who wish to delay starting a family.

Irvine Scientific

For info: 800-577-6097
www.irvinesci.com

Gel Imaging Systems

The Omega Fluor is an entry-level gel imaging system that comes standard with the basic components and exceptional

safety features for DNA- and protein-gel imaging. With the introduction of a single-wavelength UV transilluminator that is fully integrated into a light-tight cabinet, gone are the days of modular hoods sitting awkwardly on top of light boxes. A UV-safety switch, auto UV shutoff, and a UV-blocking viewport are standard features, while a high-resolution camera and focus-free lens with SmartCapture Technology maintain sample integrity with exceptional imaging performance. Omega Fluor comes with a 5-megapixel camera and a 24 cm x 20 cm imaging area. It is capable of working with UV- and white-light illumination across an extensive list of dyes, including the SYBR family, ethidium bromide, Coomassie Blue, silver stain, AdvanStain Scarlet, SYPRO Ruby, Oriole, and more. The small footprint is matched with a small price.

Gel Company/Aplegen

For info: 415-247-8760
www.gelcompany.com

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