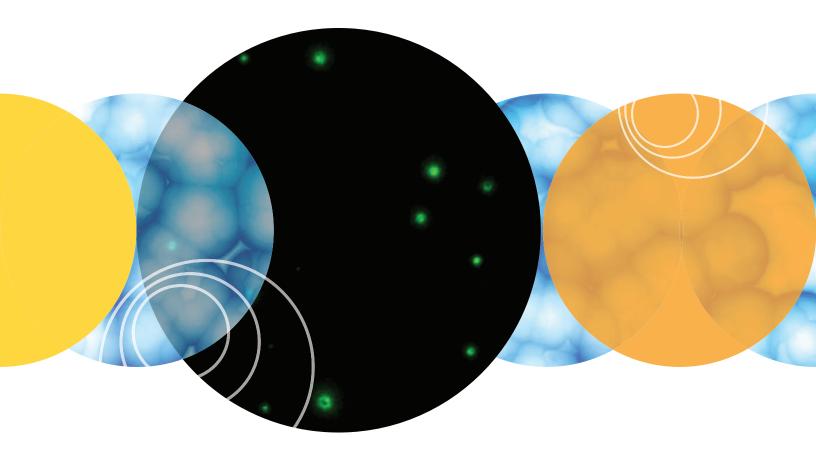
Accelerate cell line development



Get to your high value hits faster

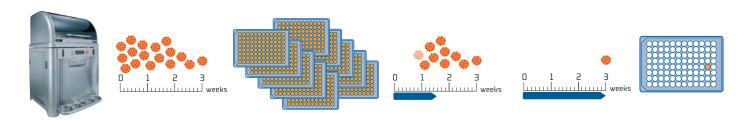




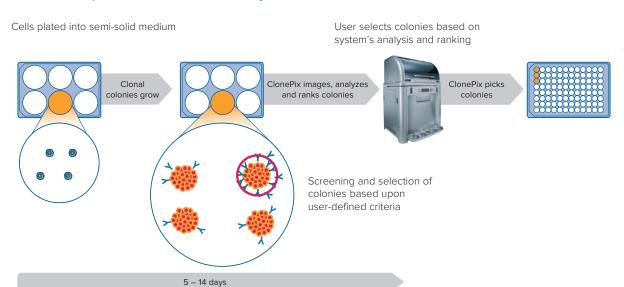
Transform your workflows to elevate productivity

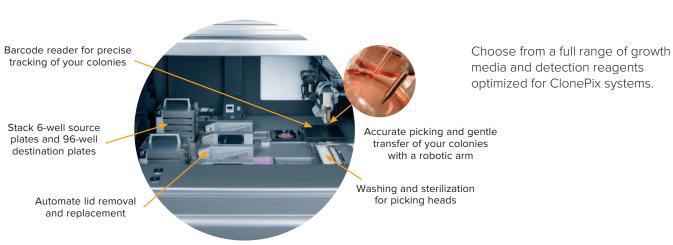
Fast screening and selection of secretory cell lines with ClonePix Systems

Screen 10x more clones in weeks, not months. Productivity comparison: ClonePix: 10000 clones in 3 weeks, Limiting dilution: 1000 clones in 2 months.



Select and pick with more accuracy and confidence





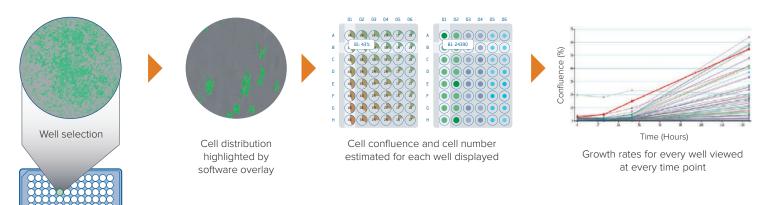
Advance to automated screening with intelligent imaging and quantitative analysis

Assessment of colony outgrowth with CloneSelect Imager System replaces subjective, timeconsuming manual screening

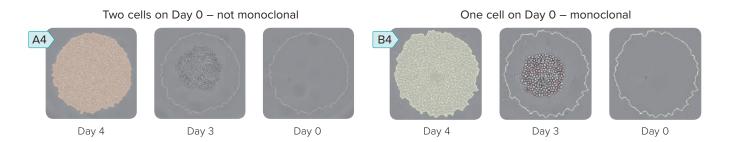
Following screening and selection of clones, the ultra-fast CloneSelect Imager System provides objective assessment of cell growth. Track and quantify cell growth over time automatically.



Analyze cell confluence and cell number in every well to verify monoclonality



Verification of monoclonality — viewing the origin of a colony. The growth (image) history of each well can be tracked back to its starting point — providing evidence of monoclonality.



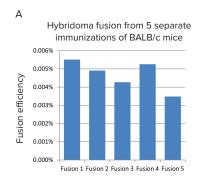
Maximize your hybridoma yield with our complete set of culture media

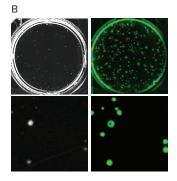
Culture media for every stage of hybridoma cell line generation

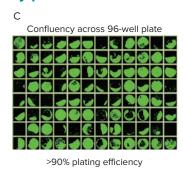
Stable hybridoma cell lines are critical for monoclonal antibody production. Our XP Media and CloneMedia portfolio of products is a complete solution that supports all stages of hybridoma cell line development from fusion to scale up. Optimized to support the selection and growth of hybridoma clones using our ClonePix 2 System, the kit is also compatible with other appropriate methods.

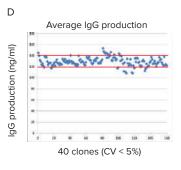
- HAT (hypoxanthine-aminopterin-thymidine) selection and cloning of hybridomas are accomplished in one step, which minimizes both time and materials required
- Not only does the semi-solid CloneMedia method eliminate the possible masking of potentially valuable slow-growing clones by fast-growing clones, but it also reduces or eliminates sub-cloning steps
- Reduce hands-on time when the workflow is combined with the ClonePix 2 System

Optimized growth conditions result in stable antibody production









Hybridomas were generated, selected, and screened using our XP Media and CloneMedia suite of hybridoma media. (A) 5 individual hybridoma fusion experiments were conducted on BALB/c mice, immunized to the same antigen, to assess reproducibility of fusions in XP Media suite of products. Fusion efficiency was calculated by dividing the number of hybridoma colonies detected on the ClonePix 2 System by the number of splenocytes grown in XP Media Pre-Fusion Myeloma Growth Medium and Hybridoma Expansion Medium (without HT). (B) Images of hybridomas were captured with the ClonePix 2 System in white light (left panel) and FITC (right panel), after 7 days growth, to determine growth and expression of IgGs, respectively. Colonies grown in the presence of CloneDetect were ranked according to their FITC intensity (indicating total IgG production), with the highest producers picked for further characterization. (C) Software detection of cell confluency, indicated by the green overlay, across a 96-well plate allowing for a quick visualization of plating efficiency. Images were collected on the CloneSelect Imager. 87 out of 96 wells grew to a confluency >5% after 7 days (the initial confluency of all wells was <1%) for a >90% plating efficiency. The real plating efficiency may be even higher because slow growing clones may be classified as non-growing using the >5% confluency criteria. (D) IgG production plotted per well (show in blue) with red lines indicating 2 s.d. away from the mean. Because these are stable hybridomas, we don't expect a large variation in the total amount of IgG produced per cell, which is confirmed by <5% CV across all clones tested.

The full kit contains*:



XP Media Pre-Fusion Myeloma Growth Medium and Hybridoma Expansion Medium (without HT), P/N K8862

Used to support the growth of myeloma cells before fusion. Also supports expansion of hybridoma clones. Does not contain hypoxanthine or thymidine (HT).



CloneMedia Hybridoma Semi-Solid Selection and Cloning Medium (with HAT), P/N K8865

Used after fusion of splenocytes and myeloma cells to select and clone hybridomas in one step. Optimized for colony formation. Equally suitable for fresh fusions and for stable hybridoma cell lines.



XP Media Hybridoma Fusion Medium, P/N K8863

Used to wash cells before fusion and during fusion process. Does not contain supplements to support growth.



XP Media Hybridoma Growth Medium (with HT), P/N K8866

Optimized for hybridoma expansion following clone selection and colony picking. Contains hypoxanthine and thymidine (HT) and is used to wean hybridomas off aminopterin from the selection process.



XP Media Hybridoma Fusion Recovery Medium, P/N K8864

Used to promote hybridoma viability after the fusion process but before clone selection. Does not contain hypoxanthine, aminopterin, and thymidine (HAT).



Hybridoma Polyethylene Glycol (PEG) for Cell Fusion, P/N K8868

Used for the fusion of mouse splenocytes and parental myeloma cells to generate hybridomas. PEG is present as a 50% solution in DMEM.

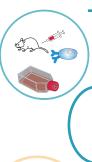


CloneMedia Hybridoma Semi-Solid Selection and Cloning Medium (without HAT), P/N K8867

Does not contain any selection reagents. If appropriate selective reagent has been added, then the medium can be used after fusion to select and clone hybridomas in one step. Optimized for colony formation.

*Components can be ordered separately. If you are using alternate hybridoma selection methods, then CloneMedia Hybridoma Semi-Solid Selection and Cloning Medium (without HAT) (P/N K8867) is available. You must add agents for hybridoma selection to this medium before use.

Accelerate your hybridoma cell line development with a complete set of platforms and culture media



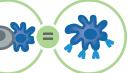
Pre-Fusion

Culture myeloma cells in pre-fusion growth medium. Prepare splenocytes for fusion

Expansion Medium without HT (K8862), Fusion Medium (K8863)

Fuse splenocytes and myeloma cells.

Fusion



Fusion Medium (K8863), Polyethylene Glycol (K8868), Fusion Recovery Medium (K8864)



Clone Selection

Clone screening and selection in semi-solid medium.

Hybridoma fusion

ClonePix 2 System, CloneDetect, CloneMedia Selection and Cloning Medium with and without HAT (K8865, K8867)

Pick selected, highproducing clones from semi-solid medium and transfer to liquid medium.

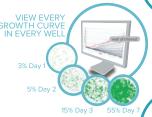
Clone Picking



gentle picking

Transfer of colony to

ClonePix 2 System, Growth Medium with HT (K8866)



Clone Stability

Monitor growth of picked clones.





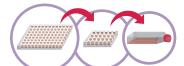
Functional Characterization

Perform secondary screening on clone supernatants (e.g. ELISA).



Cells or beads with antigen

SpectraMax i3x or other Molecular Devices microplate readers



Scale-Up and Wean

Scale up clones producing desired antibodies and wean off HT selection. Growth Medium with HT (K8866) and Expansion Medium without HT (K8862) at 1:1 ratio

Expand clones producing desired antibodies.

Expansion



Expansion Medium without HT (K8862)

Accelerate cell line development with a range of Molecular Devices platforms



ClonePix 2 Mammalian Colony Picker

Automatically screen more clones in less time than conventional techniques, select cells with optimal expression levels, and pick colonies with accuracy with the ClonePix™ 2 System. ClonePix systems are now used in over 100 laboratories around the world to increase workflow productivity, leaving more time to better characterize target proteins and run new projects.



CloneSelect Imager

With high quality imaging and intelligent image analysis, CloneSelect™ Imager allows you to assess cell confluence objectively and quantitatively. Cell growth is viewed and tracked in every well in every plate.



SpectraMax i3x Multi-Mode Microplate Reader

The SpectraMax® i3x multi-Mode microplate reader measures spectral-based absorbance, fluorescence, and luminescence with the added functionality of modular upgrades for western blot, imaging, and fast kinetics with injectors.

Unrivaled solutions

Our products empower you with unrivaled solutions that utilize imaging and intelligent image analysis to support basic research, pharmaceutical and biotherapeutic development. We are continually establishing industry standards in areas such as picking microbial colonies for genomic studies or screening and selection of mammalian cell lines. Our systems use imaging platforms to monitor cell growth, evaluate cellular responses and quantify protein production. We bring you expertise in robotics, cell and molecular biology, image analysis and interpretation, supported by a strong IP portfolio, and are truly committed to the continual development of innovative solutions for life science applications.

Ask your local representative for the ClonePix 2 System, CloneSelect Imager, or SpectraMax i3x reader brochures or download them from www.moleculardevices.com.



Contact Us

Phone: 800.635.5577

Web: www.moleculardevices.com

info@moldev.com

Check our website for a current listing

of worldwide distributors

Regional Offices

USA and Canada +1.800.635.5577 United Kingdom +44.118.944.8000

+86.10.6410.8669 China (Shanghai) +86.21.3372.1088 Europe* Hong Kong 00800.665.32860

+852.2248.6000

China (Beijing)

Japan (Osaka) +81.6.7174.8331

Japan (Tokyo)

+81.3.6362.5260 South Korea +82.2.3471.9531

*Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Spain, Sweden and Switzerland



+55.11.3616.6607

Brazil