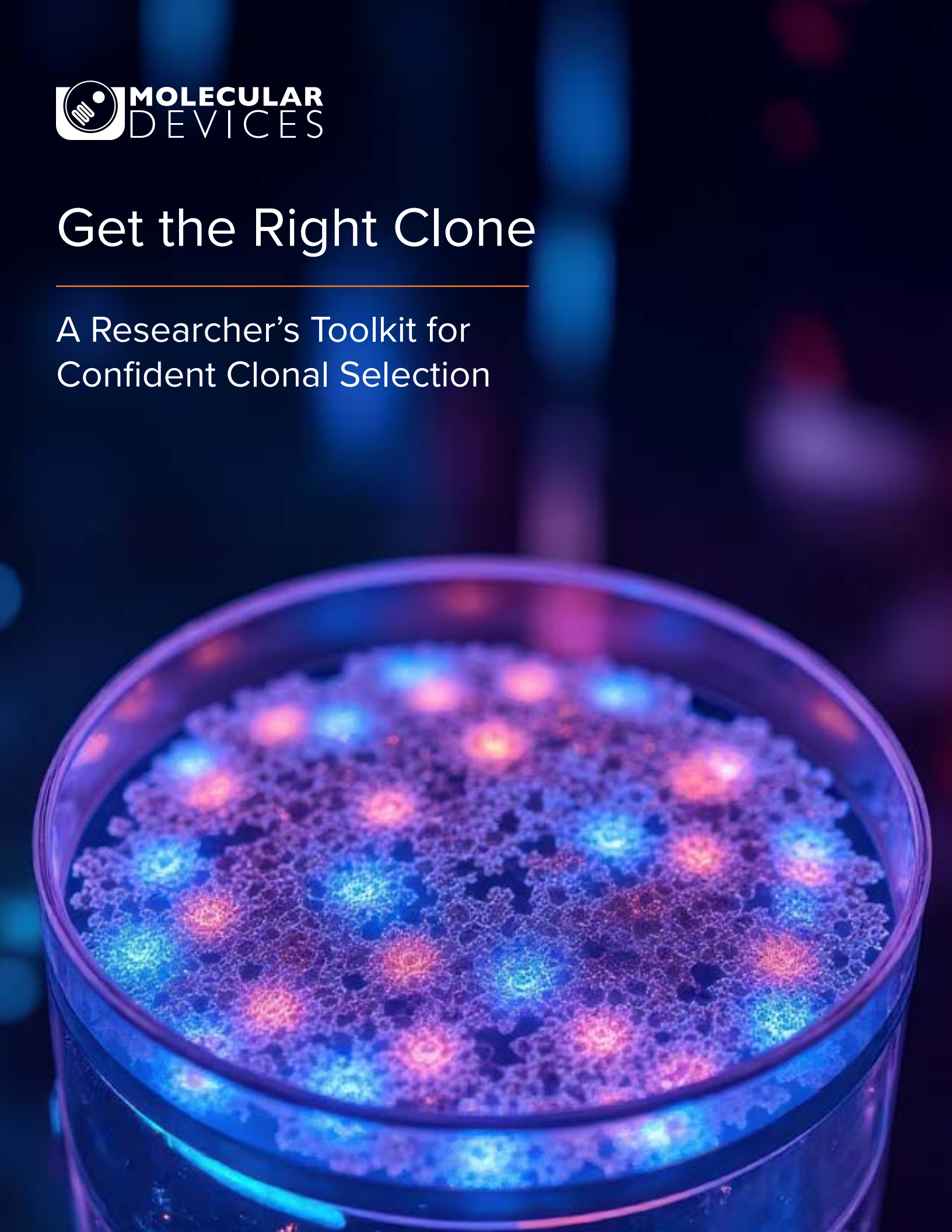
MOLECULAR DEVICES

Get the Right Clone

A Researcher's Toolkit for Confident Clonal Selection



Why the Right Clone Matters

Selecting the right clone isn't just a box to check; it's the foundation for everything that follows. A poorly selected or morphologically inconsistent clone can compromise your entire workflow, wasting time, reagents, and valuable downstream validation steps.

Whether you are engineering CHO cell lines for therapeutic discovery or screening gene-edited colonies, your workflow begins with confidence in the starting material.

Checklist: How to Spot a Clone Worth Keeping

Use this checklist during screening and selection to confidently identify high-potential clones:

- ❑ Displays uniform morphology across all replicates and time points
- ❑ Lacks satellite colonies, doublets, or signs of contamination
- ❑ Exhibits rapid and consistent growth under standard conditions
- ❑ Produces stable and high-yield protein expression (when applicable)
- ❑ Confirmed monoclonality via white light and/or fluorescence imaging
- ❑ Selected using traceable, image-documented methods
- ❑ Falls within the optimal productivity range as defined by project criteria
- ❑ Viable for scale-up in downstream manufacturing or research processes

Download the checklist here to continue to reference.

Top 5 Mistakes Scientists Make in Clone Selection

1. **Relying solely on morphology:** Visual cues can be misleading, especially in early-stage colonies.
2. **Skipping clonal assurance steps:** Without proper imaging or confirmation, monoclonality can't be guaranteed.
3. **Manual picking without documentation:** Lacks traceability and increases the risk of human error.
4. **Delaying confirmation until late stages:** This increases costs and complexity if rework is needed.
5. **Ignoring satellite colonies:** These can indicate a lack of true monoclonality or contamination.

Manual Versus Automated Selection: Side-by-Side Comparison

Factor	Manual Selection	Automated Selection with the ClonePix 2 Enhanced for Monoclonality Verification
Time	High	Reduced by 50-80%
Monoclonality Confirmation	Often manual or delayed	Image-based, early-stage assurance
Sterility	Operator-dependent	Enclosed, sterile workflows
Documentation	Minimal or consistent	Full image traceability and audit trail
Throughput	Low	Scalable to high-volume workflows

Product Spotlight: ClonePix 2 Enhanced for Monoclonality Verification

The ClonePix® 2 Enhanced for Monoclonality Verification combines high-throughput fluorescent imaging with antibody-based detection to screen, rank, and pick only the most productive and monoclonal clones. By reducing labor-intensive steps and boosting confidence in early decisions, your team can focus more on discovery and less on revalidation.

For more guidance or information, explore our full clonal selection workflow guide and connect with our scientists to help tailor a solution for your lab use.

Contact Us

Phone: +1.800.635.5577
Web: www.moleculardevices.com
Email: info@moldev.com

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Regional Offices

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Printed in USA