

CASY<sup>VIVO</sup> Cell Counter & Analyzer - Powering Breakthroughs in Cell Research

## Enhanced Cell Growth Analysis for Protein Synthesis Research

Hermann, J. et al. (2025). mTORC1 cooperates with tRNA wobble modification to sustain the protein synthesis machinery; Nature Communications, 16:4201. DOI: 10.1038/s41467-025-04201-x.

CRISPR; EPP2-iCas9	
Index	CC1
Standardization	X
Counting	X
Viability	
Volume	

### The Challenge:

Understanding the cooperative mechanisms between mTORC1 and tRNA wobble modification, essential for cell proliferation, required precise and reliable cell counting to assess growth inhibition in various complex assays, including competitive proliferation experiments.

### CASY's Contribution:

The CASY Cell Counter and Analyzer provided the precise cell counts necessary to accurately assess proliferation and measure cell growth inhibition in various assays. This robust data was fundamental for quantifying population doublings and evaluating the impact of interventions, directly supporting the study's conclusions.

### Key Benefits to Researchers:

- **Accurate Proliferation Tracking:** Obtain reliable cell counts crucial for quantifying population doublings and assessing the impact of various interventions on cell growth.
- **Quantitative Drug Sensitivity:** Enable sensitive and precise measurement of cell number changes in response to inhibitors, facilitating the determination of drug efficacy and synergistic effects.
- **Support for Competitive Assays:** Accurately count and analyze cell populations, aiding in the validation of CRISPR screen hits by monitoring growth advantages or disadvantages in mixed cultures.
- **Versatile & Reliable:** Trust CASY's robust performance across various cell lines and conditions, ensuring high-quality data for complex biological studies.

### CASY's Precise Cell Counts Enable Accurate Monitoring of Population Doublings in CRISPR Screens, Revealing Cell Proliferation Dynamics.

