

Lab inventories & logs for a biochemist: Customize yours to meet your needs. But this is what I've found helpful for me over the years

- **Recombinant protein inventory spreadsheet**

- **Purified protein tab**

- Plasmid & protein names
 - Purification date
 - Concentration
 - In mg/mL
 - In μM (*to get this, divide MW (in Da) by mg/mL concentration & multiply by 10^6 OR divide MW (in kDa) by mg/mL concentration & multiply by 10^3*)
 - Storage buffer composition
 - Stored form (# & size of aliquots, etc.)
 - Notes (be sure to write down anything “different” about this prep)
 - Color red to indicate any problems

- **Cell pellets (to purify protein out of) tab**

- Plasmid & protein names
 - Cell type
 - Harvest date
 - Culture volume & number of tubes
 - Growth and (when applicable) induction conditions
 - Notes (be sure to write down anything “different” about this prep; can also use this column to indicate whether expression has been verified via SDS-PAGE comparison of pre- and post-induction pellets)
 - Use date (when applicable)
 - Strikethrough text when pellet has been used and/or discarded
 - Shift + command + x to strikethrough
 - Color red to indicate any problems

- **Plasmids & corresponding recombinant protein info (when applicable)**
 - **Plasmid info**
 - Name, inventory number (if applicable), & description
 - Vector backbone (pET28, etc.)
 - Antibiotic resistance (or other selectable marker)
 - Size (in kb) of plasmid (when applicable, of both backbone and “insert”)
 - Promoter (e.g. T7lac)
 - Source (addgene, paper author, SLIC mutagenesis, etc.)
 - Cloning status (when applicable)
 - Notes (DOI for corresponding paper, etc.)
 - **Corresponding protein info**
 - *Note: When applicable, may want to include info for both tagged & untagged versions*
 - Size (MW), in kDa (kilodaltons)
 - Length (in amino acids)
 - Affinity tag (e.g., 8X His, Twin strep) and/or fusion protein (e.g. SUMO)
 - Tag cleavage site (TEV, thrombin, etc.)
 - UV280 absorbance to concentration conversion factor (A 0.1%(=1mg/mL) and/or A 1%(=10 mg/mL))
 - pI (estimated isoelectric point)
 - Notes
- **Primers:**
 - Sequence
 - Purpose
 - Plasmids to use with (when applicable)

- **FPLC runs**

- Date
- Column
- Buffer
- Sample
- Sample volume
- Sample concentration
- File name
- Notes

- **Enzyme activity assays**

- Date
- Enzyme (including prep date) & concentration
- Conditions tested (substrate, substrate concentration range, pH, etc.)
- Color red to indicate any problems

- **Other organizational spreadsheets:**

- Stock solutions & buffer prep
- SDS-PAGE calculator
- Plasmid sequencing results & miniprep concentrations

- **Other “logs”:**

- Adobe Illustrator file with annotated PAGE gels
- Word file with FPLC screenshots