

STANDARD STORM BUFFER

(modified from Avtar Singh, Zipfel lab, which was modified from Xiaowei Zhuang's Website)

- 400 uL Dilution Buffer
- 100 uL of 50% (m/v) Glucose Stock
- 5 uL of BME
- 10 uL of GLOX solution (Make fresh each week)
- 5 uL of COT (200 mM in DMSO, *optional)

COMPONENTS:

DILUTION BUFFER (DB)

- 50 mM NaCl
- 200 mM Tris
- pH 8.0

BME

- Beta-mercaptoethanol (Sigma-Aldrich 63689-25ML-F).
- Use straight. Store at 4C.

OXYGEN SCAVENGER (GLOX)

- 100 uL of Dilution Buffer (see above)
- 7 mg Glucose Oxidase (G7141, Sigma), or 14 mg of Pyranose Oxidase** (C9322, Sigma)
- 25 uL of catalase (20 mg/mL; Sigma Aldrich)
- Dissolve glucose oxidase in Dilution Buffer, vortex to mix. After mixing the catalase suspension well, add catalase to glucose oxidase solution.
- Centrifuge at maximum speed for 1 min. Use the yellow supernatant for imaging buffers.
- Store working tube in fridge for a few weeks.

COT

- Cyclooctatetraene (138924 ALDRICH, *some researchers do not bother with this compound).
- Dilute 0.0208 g COT in 1 mL of DMSO. Aliquot and store frozen

***Pyranose Oxidase is more expensive but ensures stable buffer pH in buffers exposed to air. Glucose oxidase will cause buffer pH to drop rapidly (pH ~4 or less) if exposed to air for a few hours.*