

Protocol for Taxol Janelia Fluor® 646 (Cat. No. 6266)

Taxol (often referred to as Paclitaxel) is a diterpenoid that binds to tubulin. It promotes and stabilizes tubulin polymerization, which accounts for its anti-mitotic and cytotoxic action. The conjugation of a fluorescent dye to taxol offers a convenient way to image the microtubule cytoskeleton of a cell; well known fluorescent probes based on this principle are: Flutax 1 (Cat. No. 2226) and Flutax 2 (Cat. No. 6254).

Taxol Janelia Fluor® 646 is a new tubulin fluorescent probe that incorporates the red fluorogenic dye, Janelia Fluor® 646. The fluorogenicity of the dye renders this probe non-fluorescent until bound to tubulin, enabling no-wash experimental protocols. Guidelines for using this product in a no-wash imaging protocol are provided below.

Protocol

- Prepare a stock solution of Taxol Janelia Fluor® 646 in DMSO. *Stock solutions can be aliquoted and stored for up to 1 month at $\leq -20^{\circ}\text{C}$.*
- Dilute the stock solution into warm media (37°C) and place into a pre-warmed box (for storage in the incubator). *Aqueous working solutions should be prepared and used on the same day.*
- Apply to live cells at a concentration of $3\ \mu\text{M}$. *Lower concentrations can be used and the concentration should be optimized for individual experiments.*
- Incubate for 1 hour at 37°C prior to imaging. *If preferred, a washing protocol can be used prior to imaging. Should this step is required, rinse the cells three times with 1x PBS and 2% BSA and apply fresh media prior to imaging.*