

## DATASHEET

### Rhodamine-Actin

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From rabbit skeletal muscle  
( $\alpha$ -skeletal muscle actin)

For Use in Research Only.  
Not for Use in Diagnostic Processes.

Quantity: 2x100  $\mu$ g  
Cat.#: 8103-01

#### Product Description

G-actin from rabbit skeletal muscle is a single chain polypeptide with a molecular weight of 42kD consisting of 374 amino acids. Rhodamine-Actin is chemically modified G-actin by esterification of lysin residues with tetramethylrhodamine-5/6. The dye/protein molar ratio of Rhodamine-Actin is >0.5:1, using a molar extinction coefficient of 72,000  $\text{cm}^{-1} \text{M}^{-1}$  at 558nm. The protein concentration of Rhodamine-Actin was determined by Bradford method. Rhodamine-Actin is supplied as a lyophilized powder containing 5mM Tris-Cl pH 8.2, 1mM ATP, 1mM DTT and 0.2mM  $\text{CaCl}_2$ , when reconstituted with  $\text{H}_2\text{O}$  to a 1mg/ml solution.

For dilution of G-actin or exchange of ligand buffer into actin compatible buffer, MonoMix (Cat no.: 5100-0\*) may be used. In the absence of nucleators, the polymerization of G-actin can be initiated by PolyMix (Cat no.: 5000-0\*).

#### Product Handling

##### Preparation of a working stock

Example: Add 100 $\mu$ l of  $\text{H}_2\text{O}$  to a tube with Rhodamine-Actin to obtain a working stock of 1mg/ml (24 $\mu$ M) and vortex for 30secs. The final concentration of G-actin should not exceed 3mg/ml. Allow the G-actin solution to rehydrate for 5min at room temperature, dissolve the pellet by pipetting several times up and down to obtain a homogeneous, pinkish Rhodamine-Actin solution. Leave to fully rehydrate for another 2 min, vortex for 30secs and spin 1min, 15.000xg. For standard applications the Rhodamine-Actin working stock is now ready to use. For critical assays the working stock should at least be dialyzed (100vol. of MonoMix, O/N) followed by high-speed centrifugation. For less critical assays the actin working stock may be filtered (0.2-0.45 $\mu$ m) or pre-spun (15.000rpm, 10min).

#### Product Storage and Stability

The highest product performance is achieved with Rhodamine-Actin stored at  $-70^\circ$  until used. Once dissolved, Rhodamine-Actin is kept on ice protected from light and will be stable for 5 days. Avoid refreezing of solubilized Rhodamine-Actin.

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