

DATASHEET

Non-muscle actin

Non-muscle actin

From porcine brain
(β/γ -actin, 99% purity)

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

Quantity: 1x100 μ g
Cat. #: 8401-01

Product Description

Non-muscle actin from brain is a mixture β/γ non-muscle actin isoforms each consisting of a single chain polypeptide with a molecular weight of 42kD consisting of 374 amino acids. Non-muscle actin is supplied as lyophilized powder containing 2mM Tris-Cl pH 8.2, 2mM ATP, 0.5mM DTT, 0.1mM CaCl₂ and 0.2% disaccharides, when reconstituted with H₂O. For dilution of G-actin or exchange of ligand buffer into actin compatible buffer MonoMix (Cat. #: 5100-0*) may be used. In the absence of nucleators, the polymerization of G-actin is initiated by PolyMix (Cat. #: 5000-0*).

Product Handling

Preparation of a stock solution

Add e.g. 0.1ml of H₂O to the tube with actin to obtain a stock solution of 1mg/ml (23.8 μ M). A stock concentration of 4mg/ml (95.2 μ M) should not be exceeded to avoid spontaneous polymerization. Allow the G-actin solution to rehydrate for 2min at room temperature and dis-solve using a pipette. If G-actin is used for polymerization with PolyMix, we recommend to prepare a G-actin stock of 1.1mg/ml (26.2 μ M), as addition of PolyMix will dilute the G-actin/F-actin stock to a final concentration of 1mg/ml (23.8 μ M).

The actin stock is ready for use. For critical assays we recommend dialysis of actin against 50-100vol. of MonoMix O/N and subsequent centrifugation at 100.000xg for 60min to remove any aggregates from lyophilization. For less critical assays the actin working stock may be filtered (0.2-0.45 μ m) or pre-spun (15.000xg, 10min).

Product Storage and Stability

Non-muscle actin stored at -70°C upon arrival will be stable in performance for at least 6 months from the date of purchase. Solubilized actin is kept on ice and should be used within 1 week. Avoid refreezing.

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