

DATASHEET

ϵ -ATP Actin

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From rabbit skeletal muscle
(α -skeletal muscle actin, >99% purity)

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

Quantity: 1x0.5mg
Cat. #: 8119-01

Product Description

G-actin from rabbit skeletal muscle is a single chain polypeptide (42kDa, 374 aa) with stabilizing binding sites for adenosine phosphate nucleotides and divalent cations. Both are essentially necessary to stabilize the tertiary actin structure. The fluorescent Etheno-ATP (1, N⁶-Etheno-adenosine-5'-triphosphate, sodium salt) bound to Actin has the following spectroscopic properties: λ_{max} 275 nm, ϵ 6.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5), λ_{ex} 300 nm, λ_{em} 415 nm. Etheno-ATP Actin (500 μ g) is supplied as lyophilized powder containing 2mM Tris-Cl pH 8.2, 1.0mM Etheno-ATP, 0.1mM DTT, 0.08mM CaCl₂ and 0.2% disaccharides, when reconstituted with 0.5ml H₂O.

For dilution of Etheno-ATP G-actin, the lyophilized buffer (10x ϵ -ATP MonoMix, 500 μ l) is included and can be used for reference with limitations. The buffer included is the same buffer used for manufacturing the Etheno-ATP actin. To stabilize the buffer, it must be freeze-dried. Thus, the limitation using the Etheno-ATP G-actin buffer for reference is a possible volume deviation by pipetting. Use the same pipette to reconstitute the actin and the buffer to minimize the differences of volumes added.

Product Handling

Preparation of an ϵ -ATP actin stock solution

Add 500 μ l ultrapure H₂O to the tube with G-actin to obtain a stock solution of 1mg/ml (23.8 μ M). A stock concentration of 3mg/ml should not be exceeded. Allow the G-actin solution to rehydrate for 2min at room temperature and dissolve using a pipette. If G-actin is used for polymerization, add 100mM KCl and 2mM MgCl₂ final concentration.

Preparation of an ϵ -ATP actin stock solution

Add 0.5ml of H₂O to the tube with to obtain a 10x ϵ -ATP MonoMix stock solution containing 20mM Tris-Cl pH 8.2, 10mM ϵ -ATP, 1mM DTT, 0.8mM CaCl₂.

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For product inquiries please contact:

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Product Storage and Stability

Freeze-dried ϵ -ATP Actin stored at -70°C upon arrival will be stable in performance for at least 6 months from the date of purchase. Solubilized ϵ -ATP actin is kept on ice and should be used within three days. Do not refreezing of ϵ -ATP actin in solution.

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