

## DATASHEET

### Pyrene Actin (100%)

From rabbit skeletal muscle  
( $\alpha$ -skeletal muscle actin, >99% purity)

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

Quantity: 1x1.0mg / 5x1.0mg  
Cat. #: 8112-01

#### Product Description

G-actin from rabbit skeletal muscle is a single chain polypeptide with a molecular weight of 42kD consisting of 375 amino acids. Pyrene Actin is chemically modified G-actin carrying a pyrenyl group covalently bound to Cys374 at the C-term of the molecule. Pyrene Actin (100%) has a dye/protein molar ratio of 1:1.

The product is supplied as a lyophilized powder containing 2mM Tris-Cl pH 8.2, 0.4mM ATP, 0.5mM DTT, 0.1mM CaCl<sub>2</sub>, 1mM NaN<sub>3</sub> and 0.3% disaccharides, when reconstituted with 1ml H<sub>2</sub>O. For dilution of Pyrene G-actin or exchange of ligand buffer into an actin compatible buffer, MonoMix (Cat.#: 5100-01) may be used. In the absence of nucleators, the polymerization of G-actin can be initiated by PolyMix (Cat.#: 5000-01).

Due to a proprietary cryoconservation technique this highly soluble Pyrene Actin is of excellent biological activity and quality.

#### Product Handling

##### Preparation of a working stock

Example: add 1ml of H<sub>2</sub>O to the tube with 1mg Pyrene Actin to obtain a stock solution of 1mg/ml (24 $\mu$ M). A stock concentration of 4mg/ml (96 $\mu$ M) should not be exceeded to avoid spontaneous polymerization. Allow the actin solution to rehydrate for 2min at room temperature and dissolve using a pipette. If Pyrene Actin is used for polymerization with PolyMix (Cat.#: 5000-0\*), we recommend to prepare a G-actin stock of 1.1mg/ml (26 $\mu$ M), as addition of PolyMix will dilute the G-actin/F-actin stock to a final concentration of 1mg/ml (24 $\mu$ M).

For fluorometrical measurements Pyrene Actin may applied to a gel filtration column or dialyzed o/n against 50-100vol. of MonoMix or a G-actin compatible buffer and subsequently centrifuged at 100.000xg for 60min or to remove any aggregates from freeze-drying.

*For product inquiries please contact:*

cusserv@hypermol.com  
Fon: +49 (0)521 9876228  
Fax: +49 (0)521 9876231  
www.hypermol.com

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#### Product Storage and Stability

Store this product at  $-70^{\circ}$  upon arrival, where it will be stable for at least 6 months. Once dissolved Pyrene Actin is kept on ice protected from light and will be stable for at least 4 days. Avoid refreezing of Pyrene Actin solutions.

#### Selection of Related Products

<u>Product</u>	<u>Quantity</u>	<u>Cat. #</u>
Actin (alpha-Actin skeletal muscle, rabbit)	4x250 $\mu$ g	8101-01
Actin (alpha-Actin skeletal muscle, rabbit)	1x1.0mg	8101-03
Atto488-Actin (alpha-Actin skeletal muscle, rabbit)	1x100 $\mu$ g	8153-01
Atto488-Actin (alpha-Actin skeletal muscle, rabbit)	5x100 $\mu$ g	8153-02
Pyrene-Actin 10% (alpha-Actin skeletal muscle, rabbit)	1x1.0mg	8102-01
PolyMix (10x) F-actin buffer	1x1.0ml	5000-01
ME-Buffer (10x) Magnesium Exchange Buffer	2x1.0ml	5111-01
KMEI-Buffer (10x) Magnesium Exchange Buffer	2x1.0ml	5030-01

More products and further information on [www.hypermol.com](http://www.hypermol.com).  
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Fon: +49 (0)521 9876228  
Fax: +49 (0)521 9876231  
[www.hypermol.com](http://www.hypermol.com)