

## Native Rabbit Actin

<b>Catalog No.</b>	CRA104A	<b>Quantity:</b>	10 µg
	CRA104B		50 µg
	CRA104C		1.0 mg

**Description:** Actin is a muscle protein localized in the I band of the myofibrils; acting along with myosin, it is responsible for contraction and relaxation of muscle. Each actin protomer binds one molecule of ATP and has one high affinity site for either calcium or magnesium ions, as well as several low affinity sites. Actin exists as a monomer in low salt concentrations, but filaments form rapidly as salt concentration rises, with the consequent hydrolysis of ATP. It occurs in globular (G-actin) and fibrous (F-actin) forms. Actin is found in all eukaryotic cells (except for nematode sperm). Actin is one of the most highly-conserved proteins, differing by no more than 20% in species as diverse as algae and humans. Its other functions include: cell motility, cell division and cytokinesis, vesicle and organelle movement, cell signaling, and the establishment and maintenance of cell junctions and cell shape.

Ultra pure Actin consists in the alpha-skeletal muscle isoform and is purified from rabbit striated muscle.

The purification method used (according to Spudich & Watts) results in a highly purified protein.

**Source:** Rabbit Muscle

**Molecular Weight:** 43 kDa

**Formulation:** Sterile filtered and then lyophilized from a 1.0 mg/ml solution containing 10 mM Tris/HCl buffer, pH 8.0 + 0.2 mM CaCl<sub>2</sub> + 0.2 mM ATP + 1 mM DTT + 0.5% (w/v) SDS.

**Purity:** >98.0% as determined by RP-HPLC and SDS-PAGE.

**Reconstitution:** **Centrifuge vial prior to opening.** First add sterile water to the vial to fully solubilize the protein to a concentration not less than 100 µg/ml. After complete solubilization of the protein, it can be further diluted to other aqueous solutions.

**Storage & Stability:** Lyophilized protein is stable at room temperature for 3 weeks, but it is recommended to store the lyophilized product desiccated at -20°C to -80°C. Upon reconstitution, protein should be stored at 2-4°C for one week and for future use at -20°C to -80°C. Add a carrier protein (0.1% HSA or BSA) as a stabilizer for long term storage. **Please note that the addition of any carrier protein into this product may produce unwanted endotoxin. This depends upon the particular application employed. Avoid repeated freeze-thaw cycles.**

**Applications:** Protein standard in 1D and 2D SDS gel electrophoresis  
Immunoassays  
Immunization

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