iFluor™ 488 Conjugated Anti-Actin Antibody [JJ09-29]

HA720160F

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IF-Cell, IF-Tissue, FC, WB
Molecular Wt:	Predicted band size: 42 kDa
Clone number:	JJ09-29

Description: All eukaryotic cells express Actin, which often constitutes as much as 50% of total cellular protein. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. While lower eukaryotes, such as yeast, have only one Actin gene, higher eukaryotes have several isoforms encoded by a family of genes. At least six types of Actin are present in mammalian tissues and fall into three classes. α-Actin expression is limited to various types of muscle, whereas β-Actin and γ-Actin are the principle constituents of filaments in other tissues. Members of the small GTPase family regulate the organization of the Actin cytoskeleton. Rho controls the assembly of Actin stress fibers and focal adhesion. Rac regulates Actin filament accumulation at the plasma membrane. Cdc42 stimulates formation of filopodia.

Conjugate: iFluor™ 488, Ex: 491nm; Em: 516nm.

Immunogen: Synthetic peptide within Human Actin aa 45-80 / 377.

Positive control: NIH/3T3, human colon carcinoma tissue.

Subcellular location: Cytoskeleton.

Database links: SwissProt: P68133 Human | P68134 Mouse | P68136 Rat

Recommended Dilutions:

WB	1:2,000-1:10,000
IF-Cell	1:100
IF-Tissue	1:50
FC	1:500-1:1,000

Storage Buffer: Preservative: 0.02% Sodium azide Constituents: 30% Glycerol, 1% BSA, 68.98% PBS

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

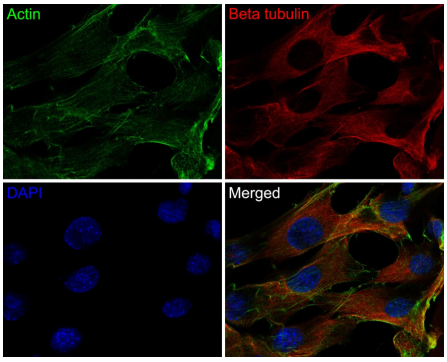

Fig1: Immunocytochemistry analysis of NIH/3T3 cells labeling Actin with Rabbit anti-Actin antibody (HA720160F) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 2% normal goat serum for 1 hour at 37 ℃. Cells were then incubated with Rabbit anti-Actin antibody (HA720160F) at 1/100 dilution in 2% normal goat serum overnight at 4 ℃. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/200 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) were used as the secondary antibody at 1/800 dilution.

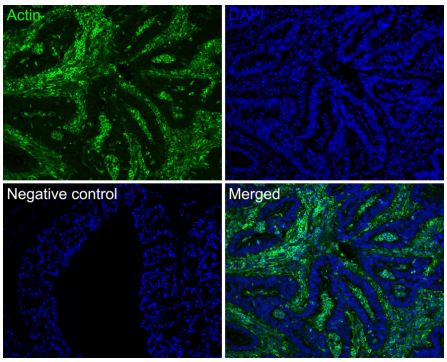

Fig2: Immunofluorescence analysis of paraffin-embedded human colon carcinoma tissue labeling Actin (HA720160F).

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS. And then probed with the primary antibody Actin (HA720160F, iFluor™ 488) at 1/50 dilution overnight at 4 ℃, washed with PBS. DAPI was used as nuclear counterstain.

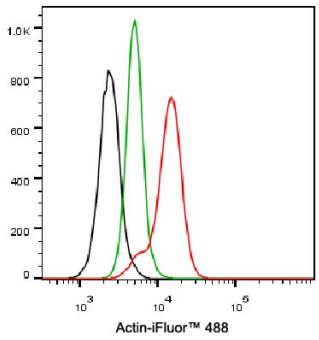

Fig3: Flow cytometric analysis of NIH/3T3 cells labeling Actin.

Cells were fixed and permeabilized. Then incubated for 30 minutes at +4℃ with Actin (HA720160F, red, 1ug/ml) and Rabbit IgG Isotype Control (iFluor™ 488, green, 1ug/ml). Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Moilanen AM et al. WDR12, a Member of Nucleolar PeBoW-Complex, Is Up-Regulated in Failing Hearts and Causes Deterioration of Cardiac Function. PLoS One 10:e0124907 (2015).
2. Rafatian N et al. Cardiac macrophages and apoptosis after myocardial infarction: effects of central MR blockade. Am J Physiol Regul Integr Comp Physiol 307:R879-87 (2014).