ARG55928
anti-gamma Actin antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes gamma Actin
Tested Reactivity	Hu
Predict Reactivity	Ms, Rat, Bov, Chk, Hm, Mk, Pig, Rb, Xenopus, Zfsh
Tested Application	FACS, ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	gamma Actin
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to aa. 188-215 (Center) of Human gamma Actin.
Conjugation	Un-conjugated
Alternate Names	BRWS2; Actin, cytoplasmic 2; DFNA26; DFNA20; ACT; HEL-176; Gamma-actin; ACTG

Application Instructions

Application table

Application	Dilution
FACS	1:10 - 1:50
ICC/IF	1:10 - 1:50
WB	1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Positive Control: K562

Properties

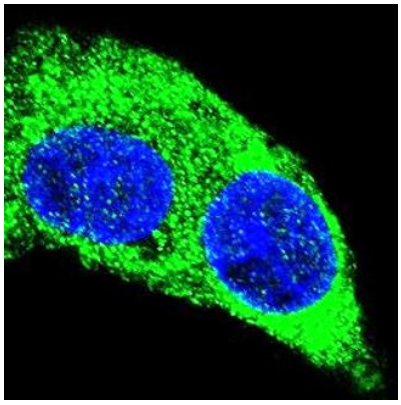
Form	Liquid
Purification	This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Buffer	PBS and 0.09% (W/V) Sodium azide.
Preservative	0.09% (W/V) Sodium azide
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

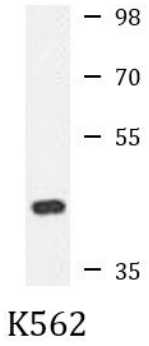
Database links	GeneID: 71 Human Swiss-port # P63261 Human
Gene Symbol	ACTG1
Gene Full Name	actin gamma 1
Background	Actins are highly conserved proteins that are involved in various types of cell motility, and maintenance of the cytoskeleton. In vertebrates, three main groups of actin isoforms, alpha, beta and gamma have been identified. The alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. The beta and gamma actins co-exist in most cell types as components of the cytoskeleton, and as mediators of internal cell motility. Actin, gamma 1, encoded by this gene, is a cytoplasmic actin found in non-muscle cells. Mutations in this gene are associated with DFNA20/26, a subtype of autosomal dominant non-syndromic sensorineural progressive hearing loss. Alternative splicing results in multiple transcript variants.[provided by RefSeq, Jan 2011]
Function	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. [UniProt]
Calculated Mw	42 kDa
PTM	The methylhistidine determined by Bienvenut et al is assumed to be the tele-methylhistidine isomer by similarity to the mouse ortholog. Oxidation of Met-44 and Met-47 by MICALs (MICAL1, MICAL2 or MICAL3) to form methionine sulfoxide promotes actin filament depolymerization. MICAL1 and MICAL2 produce the (R)-S-oxide form. The (R)-S-oxide form is reverted by MSRB1 and MSRB2, which promote actin repolymerization (By similarity). Monomethylation at Lys-84 (K84me1) regulates actin-myosin interaction and actomyosin-dependent processes. Demethylation by ALKBH4 is required for maintaining actomyosin dynamics supporting normal cleavage furrow ingression during cytokinesis and cell migration. (Microbial infection) Monomeric actin is cross-linked by V.cholerae toxins RtxA and VgrG1 in case of infection: bacterial toxins mediate the cross-link between Lys-50 of one monomer and Glu-270 of another actin monomer, resulting in formation of highly toxic actin oligomers that cause cell rounding (PubMed:19015515). The toxin can be highly efficient at very low concentrations by acting on formin homology family proteins: toxic actin oligomers bind with high affinity to formins and adversely affect both nucleation and elongation abilities of formins, causing their potent inhibition in both profilin-dependent and independent manners (PubMed:26228148).
Cellular Localization	Cytoplasm, cytoskeleton.

Images



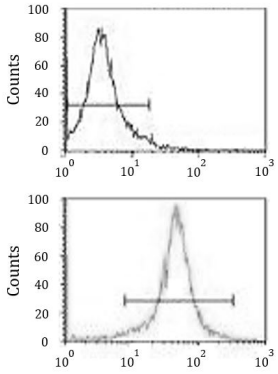
ARG55928 anti-gamma Actin antibody ICC/IF image

Immunofluorescence: HepG2 cells stained with ARG55928 anti-gamma Actin antibody (green). DAPI (blue) for nuclear staining.



ARG55928 anti-gamma Actin antibody WB image

Western blot: 35 µg of K562 cell lysate stained with ARG55928 anti-gamma Actin antibody.



ARG55928 anti-gamma Actin antibody FACS image

Flow Cytometry: K562 cells stained with ARG55928 anti-gamma Actin antibody (bottom histogram) or without primary antibody control (top histogram), followed by incubation with FITC labelled secondary antibody.