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ACTG1 Rabbit pAb

Catalog # AP97752

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P63261
Other Accession	P63261
Reactivity	Rat
Predicted	Human, Mouse, Chicken, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41793
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ACTG1
Epitope Specificity	3-100/377
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the actin family.
SUBUNIT	Polymerization of globular actin (G-actin) leads to a structural filament (F-actin) in the form of a two-stranded helix. Each actin can bind to 4 others.
Post-translational modifications	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. 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.
DISEASE	Deafness, autosomal dominant, 20 (DFNA20) [MIM:604717]: A form of non-syndromic sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information. Note=The disease is caused by mutations affecting the gene represented in this entry. Baraitser-Winter syndrome 2 (BRWS2) [MIM:614583]: A rare developmental disorder characterized by the combination of congenital ptosis, high-arched eyebrows, hypertelorism, ocular colobomata, and a brain malformation consisting of anterior-predominant lissencephaly. Other typical features include postnatal short stature and microcephaly, intellectual disability, seizures, and hearing loss. Note=The disease is caused by mutations affecting the gene represented in this entry.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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]

Additional Information

Gene ID	71
Other Names	ACT; ACTG; DFNA20; DFNA26; HEL-176; Actl; E51; ACTG_HUMAN; ACTG1; Gamma-actin; 3.6.4.-; ACTG_MOUSE; ACTG_RAT; actin gamma 1; deafness, autosomal dominant 20; deafness, autosomal dominant 26
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ACTG1
Synonyms	ACTG
Function	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. May play a role in the repair of noise-induced stereocilia gaps thereby maintains hearing sensitivity following loud noise damage (By similarity).
Cellular Location	Cytoplasm, cytoskeleton

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