Human alpha-Smooth Muscle Actin/ACTA2 antibody

Catalog Number: ATGA0358

PRODUCT INFORMATION

Catalog number
ATGA0358

Clone No.
AT132D3

Product type
Monoclonal Antibody

UnitProt No.
P62736

NCBI Accession No.
NP_001604

Alternative Names
Aortic smooth muscle actin, Alpha-actin-2, Cell growth-inhibiting gene 46 protein, Actin, Aortic smooth muscle, Intermediate form, ACTSA, ACTVS, GIG46

PRODUCT SPECIFICATION

Antibody Host
Mouse

Reacts With
Human

Concentration
1mg/ml (determined by BCA assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen
Recombinant human ACTA2 (3-377aa) purified from E. coli

Isotype
IgG1 kappa

Purification Note
By protein-A affinity chromatography

Application
ELISA, WB, ICC/IF, FACS

Usage
The antibody has been tested by ELISA, Western blot, ICC/IF and FACS analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

For research use only. This product is not intended or approved for human, diagnostics or veterinary use.

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Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

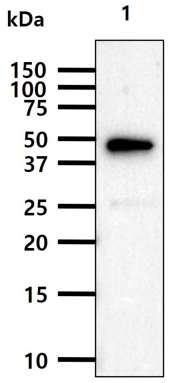
Alpha-actin-2 also known as actin, aortic smooth muscle or alpha smooth muscle actin (alpha-SMA, SMactin, alpha-SM-actin, ASMA). Actin proteins are major components of the eukaryotic cytoskeleton. At least six vertebrate actin isoforms have been identified. The cytoplasmic beta- and gamma-actin proteins are referred to as non-muscle actin proteins as they are predominantly expressed in non-muscle cells where they control cell structure and motility. Actin has major functions. Firstly, F-actin polymers form microfilaments - polar intracellular tracks for kinesin motor proteins, allowing the transport of vesicles, organelles and other cargo. Actin is a component of the cytoskeleton and links to alpha-actinin, E-cadherin and beta-catenin at adherens junctions. actin has a role in cell motility through polymerization and depolymerization of fibrils.

General References

Herman IM. et al. (1993) Curr Opin Cell Biol. 5(1): 48-55.
Guo DC., et al. (2009) Am J Hum Genet. 84(5): 617-627.

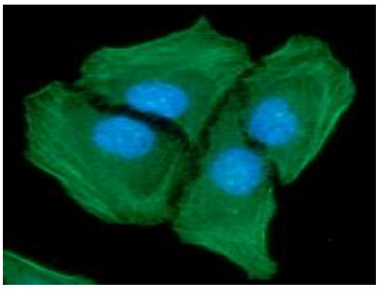
DATA

Western blot analysis (WB)



The recombinant protein (50ng) was resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human ACTA2 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system. Lane 1.: Recombinant human ACTA2 protein

Immunocytochemistry/Immunofluorescence (ICC/IF)

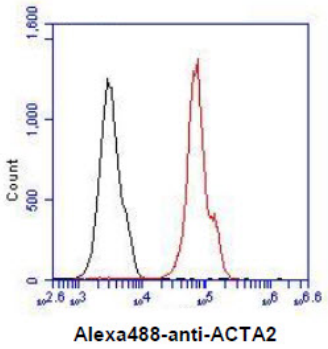


ICC/IF analysis of ACTA2 in HeLa cells. The cell was stained with ATGA0358 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

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Flow cytometry (FACS)



Flow cytometry analysis of ACTA2 in Nb2-11 cell line, staining at 2-5ug for 1x10^6cells (red line). The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate. Isotype control antibody was mouse IgG (black line).