

# ARRDC4 (G-12): sc-135445

## BACKGROUND

ARRDC1, ARRDC2 (which exists as multiple alternatively spliced isoforms), ARRDC4 and ARRDC5 are arrestin domain-containing proteins that are encoded by genes which map to human chromosomes 9, 15 and 19. Chromosome 9, on which the ARRDC1 gene is localized, contains 145 million base pairs and comprises 4% of the human genome, encoding nearly 900 genes. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster. The ARRDC2 and ARRDC5 genes map to chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. Unlike other ARRDC genes, the ARRDC4 gene maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

## REFERENCES

1. Orsini, M.J. and Benovic, J.L. 1998. Characterization of dominant negative arrestins that inhibit  $\beta$ 2-adrenergic receptor internalization by distinct mechanisms. *J. Biol. Chem.* 273: 34616-34622.
2. Chen, Z., et al. 2002. Agonist-induced internalization of the platelet-activating factor receptor is dependent on arrestins but independent of G-protein activation. Role of the C terminus and the (D/N)PXXY motif. *J. Biol. Chem.* 277: 7356-7362.
3. Moodie, S.J., et al. 2002. Analysis of candidate genes on chromosome 19 in coeliac disease: an association study of the KIR and LILR gene clusters. *Eur. J. Immunogenet.* 29: 287-291.
4. Temtamy, S.A., et al. 2007. Phenotypic and cytogenetic spectrum of 9p trisomy. *Genet. Couns.* 18: 29-48.
5. Diene, G., et al. 2007. The Prader-Willi syndrome. *Ann. Endocrinol.* 68: 129-137.
6. Lalande, M. and Calciano, M.A. 2007. Molecular epigenetics of Angelman syndrome. *Cell. Mol. Life Sci.* 64: 947-960.
7. Knoll, B., et al. 2008. An anomalous haplotype distribution of the arrestin domain-containing 4 gene (ARRDC4) haplotypes in Caucasians. *Genet. Test.* 12: 147-152.

## CHROMOSOMAL LOCATION

Genetic locus: ARRDC4 (human) mapping to 15q26.3; Arrdc4 (mouse) mapping to 7 D1.

## SOURCE

ARRDC4 (G-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ARRDC4 of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-135445 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ARRDC4 (G-12) is recommended for detection of ARRDC4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ARRDC family members.

ARRDC4 (G-12) is also recommended for detection of ARRDC4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ARRDC4 siRNA (h): sc-90129, ARRDC4 siRNA (m): sc-141275, ARRDC4 shRNA Plasmid (h): sc-90129-SH, ARRDC4 shRNA Plasmid (m): sc-141275-SH, ARRDC4 shRNA (h) Lentiviral Particles: sc-90129-V and ARRDC4 shRNA (m) Lentiviral Particles: sc-141275-V.

Molecular Weight of ARRDC4: 45 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.