

# AREL1 (N-20): sc-247252



The Power to Question

## BACKGROUND

AREL1 (apoptosis resistant E3 ubiquitin protein ligase 1), also known as KIAA0317, is a 823 amino acid cytoplasmic protein that contains one filamin repeat and one HECT (E6AP-type E3 ubiquitin-protein ligase) domain. AREL1 interacts with ubiquitinated IAP (inhibitor of apoptosis protein) antagonists such as SMAC (also known as DIABLO), HtrA2, and ARTS (also known as SEPT4) in apoptosis-stimulated cells, where the IAP antagonists were released into the cytosol from the mitochondria. AREL1 accepts ubiquitin from an E2 ubiquitin-conjugating enzyme and directly transfers the ubiquitin to the IAP antagonists, marking them for degradation and as such playing a role in apoptosis regulation. Artificial depletion of these three IAP antagonists by knockdown results in inhibition of caspase-3 cleavage, XIAP degradation and the induction of apoptosis.

## REFERENCES

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2. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
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4. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the mammalian gene collection (MGC). Genome Res. 14: 2121-2127.
5. Rose, J.E., et al. 2010. Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Mol. Med. 16: 247-253.
6. Taipale, M., et al. 2012. Quantitative analysis of HSP90-client interactions reveals principles of substrate recognition. Cell 150: 987-1001.
7. Kim, J.B., et al. 2013. Identification of a novel anti-apoptotic E3 ubiquitin ligase that ubiquitinates antagonists of inhibitor of apoptosis proteins SMAC, HtrA2, and ARTS. J. Biol. Chem. 288: 12014-12021.

## CHROMOSOMAL LOCATION

Genetic locus: AREL1 (human) mapping to 14q24.3; Arel1 (mouse) mapping to 12 D2.

## SOURCE

AREL1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AREL1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-247252 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AREL1 (N-20) is recommended for detection of AREL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AREL1 (N-20) is also recommended for detection of AREL1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AREL1 siRNA (h): sc-92294, AREL1 siRNA (m): sc-108159, AREL1 shRNA Plasmid (h): sc-92294-SH, AREL1 shRNA Plasmid (m): sc-108159-SH, AREL1 shRNA (h) Lentiviral Particles: sc-92294-V and AREL1 shRNA (m) Lentiviral Particles: sc-108159-V.

Molecular Weight of AREL1: 94 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## 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.