

# AKR1C19 (A-1): sc-393680

## BACKGROUND

Members of the AKR family are soluble NADPH-dependent oxidoreductases that play important roles in the metabolism of drugs, carcinogens and reactive aldehydes and may also act as bile acid-binding proteins. There are 12 human ARK proteins and 15 rodent ARK proteins, all of which functions as oxidoreductases that may regulate a variety of reactions throughout the cell. AKR1C19 (aldo-keto reductase family 1, member C19), also known as 1810010N06Rik, is a 323 amino acid mouse protein that is encoded by a gene which is localized to a region on mouse chromosome 13 that houses a cluster of eight hydroxysteroid dehydrogenases.

## REFERENCES

1. Penning, T.M., et al. 2000. Human 3 $\alpha$ -hydroxysteroid dehydrogenase isoforms (AKR1C1-AKR1C4) of the aldo-keto reductase superfamily: functional plasticity and tissue distribution reveals roles in the inactivation and formation of male and female sex hormones. *Biochem. J.* 351: 67-77.
2. Tanaka, T.S., et al. 2000. Genome-wide expression profiling of mid-gestation placenta and embryo using a 15,000 mouse developmental cDNA microarray. *Proc. Natl. Acad. Sci. USA* 97: 9127-9132.
3. Napoli, J.L. 2001. 17 $\beta$ -hydroxysteroid dehydrogenase type 9 and other short-chain dehydrogenases/reductases that catalyze retinoid, 17 $\beta$ - and 3 $\alpha$ -hydroxysteroid metabolism. *Mol. Cell. Endocrinol.* 171: 103-109.
4. Vergnes, L., et al. 2003. A cluster of eight hydroxysteroid dehydrogenase genes belonging to the aldo-keto reductase supergene family on mouse chromosome 13. *J. Lipid Res.* 44: 503-511.

## CHROMOSOMAL LOCATION

Genetic locus: *Akr1c19* (mouse) mapping to 13 A1.

## SOURCE

AKR1C19 (A-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 295-316 at the C-terminus of AKR1C19 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AKR1C19 (A-1) is available conjugated to agarose (sc-393680 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393680 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393680 PE), fluorescein (sc-393680 FITC), Alexa Fluor® 488 (sc-393680 AF488), Alexa Fluor® 546 (sc-393680 AF546), Alexa Fluor® 594 (sc-393680 AF594) or Alexa Fluor® 647 (sc-393680 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393680 AF680) or Alexa Fluor® 790 (sc-393680 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393680 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

AKR1C19 (A-1) is recommended for detection of AKR1C19 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for AKR1C19 siRNA (m): sc-140989, AKR1C19 shRNA Plasmid (m): sc-140989-SH and AKR1C19 shRNA (m) Lentiviral Particles: sc-140989-V.

Molecular Weight of AKR1C19: 36 kDa.

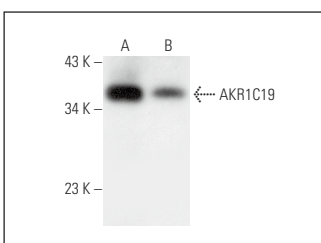
Positive Controls: mouse liver extract: sc-2256 or c4 whole cell lysate: sc-364186.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



AKR1C19 (A-1): sc-393680. Western blot analysis of AKR1C19 expression in mouse liver tissue extract (A) and c4 whole cell lysate (B).

## SELECT PRODUCT CITATIONS

1. Miyachi, Y., et al. 2021. Aldo-ketoreductase 1c19 ablation does not affect Insulin secretion in murine islets. *PLoS ONE* 16: e0260526.

## 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.