

AZ2 (F-12): sc-163720

BACKGROUND

Members of the Antizyme (AZ) family are proteins that negatively regulate cellular polyamine synthesis and uptake. Three members, AZ1, AZ2 and AZ3, have been characterized to date. AZ1 and AZ2 have a broad tissue distribution, while AZ3 is expressed exclusively in testis. AZ2 (antizyme 2), also known as OAZ2 (ornithine decarboxylase antizyme 2) or ODC-Az 2, is a 189 amino acid protein that binds to ornithine decarboxylase (ODC), inactivates it, and targets it for degradation. The human and mouse AZ2 protein sequences differ by only one amino acid. One named isoform of AZ2 is produced by ribosomal frameshifting, which occurs between the codons for Ser 32 and Asp 33. An autoregulatory mechanism enables modulation of frameshifting according to the cellular concentration of polyamines.

REFERENCES

- McCormack, A., et al. 1998. Cloning and expression of az2, a putative zinc finger transcription factor from *Drosophila melanogaster*. *Dev. Genes Evol.* 208: 172-174.
- Ivanov, I.P., et al. 1998. A second mammalian antizyme: conservation of programmed ribosomal frameshifting. *Genomics* 52: 119-129.
- Zhou, J., et al. 1999. Structure of human ornithine decarboxylase antizyme 2 gene. *Gene* 232: 165-171.
- Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604152. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Chen, H., et al. 2002. Structural elements of antizymes 1 and 2 are required for proteasomal degradation of ornithine decarboxylase. *J. Biol. Chem.* 277: 45957-45961.
- Mangold, U. and Leberer, E. 2005. Regulation of all members of the antizyme family by antizyme inhibitor. *Biochem. J.* 385: 21-28.
- Murai, N., et al. 2009. Subcellular localization and phosphorylation of antizyme 2. *J. Cell. Biochem.* 108: 1012-1021.

CHROMOSOMAL LOCATION

Genetic locus: OAZ2 (human) mapping to 15q22.31; Oaz2 (mouse) mapping to 9 C.

SOURCE

AZ2 (F-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AZ2 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-163720 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

AZ2 (F-12) is recommended for detection of AZ2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

AZ2 (F-12) is also recommended for detection of AZ2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AZ2 siRNA (m): sc-141420, AZ2 siRNA (r): sc-156111, AZ2 shRNA Plasmid (m): sc-141420-SH, AZ2 shRNA Plasmid (r): sc-156111-SH, AZ2 shRNA (m) Lentiviral Particles: sc-141420-V and AZ2 shRNA (r) Lentiviral Particles: sc-156111-V.

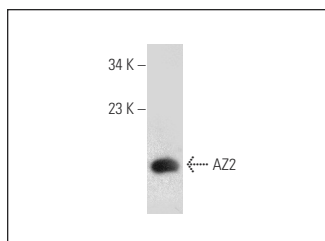
Molecular Weight of AZ2: 21 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



AZ2 (F-12): sc-163720. Western blot analysis of AZ2 expression in Jurkat whole cell lysate.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.