SANTA CRUZ BIOTECHNOLOGY, INC.

Ataxin-2 (A-18): sc-18477

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Autosomal dominant cerebellar ataxias are a group of neurodegenerative disorders caused by unstable CAG repeat expansions encoding polyglutamine tracts. Proteins with long polyglutamine tracts have an increased tendency to aggregate, often forming ubiquitinated intranuclear inclusion bodies. Ataxin-2, the gene product of the human spinocerebellar ataxia type 2 (SCA2) gene, is a basic protein with two domains (Sm1 and Sm2) implicated in RNA splicing and protein interaction. Ataxin-2 interacts with a putative RNA-binding protein Ataxin-2-binding-protein 1 (A2BP1), which is expressed in muscle and brain. Ataxin-2 is ubiquitously expressed with highest levels in the cytoplasm of Purkinje cells. Both A2BP1 and Ataxin-2 are localized to the *trans*-Golgi network. Mice expressing Ataxin-2 with polyglutamine show progressive functional deficits accompanied by loss of Purkinje cell dendritic arbor and eventually loss of Purkinje cells. In conclusion, expansion of Ataxin-2 results in spinocerebellar ataxia type 2, which affects the cerebellum and other areas of the central nervous system.

CHROMOSOMAL LOCATION

Genetic locus: ATXN2 (human) mapping to 12q24.12; Atxn2 (mouse) mapping to 5 F.

SOURCE

Ataxin-2 (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ataxin-2 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-18477 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Ataxin-2 (A-18) is recommended for detection of Ataxin-2 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).

Ataxin-2 (A-18) is also recommended for detection of Ataxin-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Ataxin-2 siRNA (h): sc-40356, Ataxin-2 siRNA (m): sc-40357, Ataxin-2 shRNA Plasmid (h): sc-40356-SH, Ataxin-2 shRNA Plasmid (m): sc-40357-SH, Ataxin-2 shRNA (h) Lentiviral Particles: sc-40356-V and Ataxin-2 shRNA (m) Lentiviral Particles: sc-40357-V.

Molecular Weight (predicted) of Ataxin-2: 140 kDa.

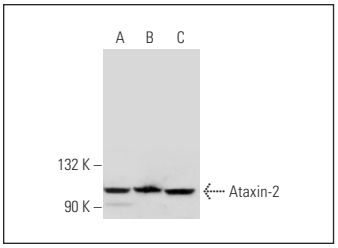
Molecular Weight (observed) of Ataxin-2: 160 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or NIH/3T3 whole cell lysate: sc-2210.

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.

DATA



Ataxin-2 (A-18): sc-18477. Western blot analysis of Ataxin-2 expression in Jurkat (**A**), K-562 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Viscomi, M.T., et al. 2005. Partial resistance of ataxin-2-containing olivary and pontine neurons to axotomy-induced degeneration. Brain Res. Bull. 66: 212-221.

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 for detailed protocols and support products.