

APO (P-17): sc-241832

BACKGROUND

Aminopeptidases comprise a family of enzymatic proteins that are widely distributed in both eukaryotes and prokaryotes and function to catalyze the removal of amino acids from the N-termini of proteins. APO (aminopeptidase O), also known as ONPEP or C9orf3 (chromosome 9 open reading frame 3), is an 819 amino acid protein that localizes to the cytoplasm and belongs to the peptidase M1 family. Expressed predominately in testis, liver, pancreas, heart and placenta and present at lower levels in kidney, brain and lung, APO uses zinc as a cofactor to catalyze the hydrolysis of amino acids from target substrates, possibly playing a role in the processing of bioactive peptides. Multiple isoforms of APO exist due to alternative splicing events.

REFERENCES

1. Taylor, A. 1993. Aminopeptidases: structure and function. *FASEB J.* 7: 290-298.
2. Foulon, T., et al. 1999. Aminopeptidase B (EC 3.4.11.6). *Int. J. Biochem. Cell Biol.* 31: 747-750.
3. Díaz-Perales, A., et al. 2005. Identification of human aminopeptidase O, a novel metalloprotease with structural similarity to aminopeptidase B and leukotriene A4 hydrolase. *J. Biol. Chem.* 280: 14310-14317.
4. Teranishi, J., et al. 2008. Evaluation of role of angiotensin III and aminopeptidases in prostate cancer cells. *Prostate* 68: 1666-1673.
5. Moore, H.E., et al. 2009. Aminopeptidase inhibition as a targeted treatment strategy in myeloma. *Mol. Cancer Ther.* 8: 762-770.

CHROMOSOMAL LOCATION

Genetic locus: C9orf3 (human) mapping to 9q22.32.

SOURCE

APO (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of APO 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-241832 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

APO (P-17) is recommended for detection of APO of 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).

APO (P-17) is also recommended for detection of APO in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for APO siRNA (h): sc-92896, APO shRNA Plasmid (h): sc-92896-SH and APO shRNA (h) Lentiviral Particles: sc-92896-V.

Molecular Weight of APO: 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.