SANTA CRUZ BIOTECHNOLOGY, INC.

CCP4 (S-17): sc-246222

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CCP4 (cytosolic carboxypeptidase 4), also known as AGBL1 (ATP/GTP-binding protein-like 1), is a 1,066 amino acid cytoplasmic protein that belongs to the peptidase M14 family. As a metallocarboxypeptidase, CCP4 catalyzes the deglutamylation of polyglutamate side chains generated by post-translational polyglutamylation in proteins such as tubulins. In addition, CCP4 removes gene-encoded polyglutamates from the carboxy-terminus of target proteins such as MYLK. Existing as three alternatively spliced isoforms, CCP4 binds one zinc ion per subunit. The gene that encodes CCP4 consists of approximately 887,049 bases and maps to human chromosome 15q25.3. Chromosome 15 houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

1. Knoll, J.H., Nicholls, R.D., Magenis, R.E., Graham, J.M., Lalande, M. and Latt, S.A. 1989. Angelman and Prader-Willi syndromes share a common chromosome 15 deletion but differ in parental origin of the deletion. Am. J. Med. Genet. 32: 285-290.
2. Hurowitz, G.I., Silver, J.M., Brin, M.F., Williams, D.T. and Johnson, W.G. 1993. Neuropsychiatric aspects of adult-onset Tay-Sachs disease: two case reports with several new findings. J. Neuropsychiatry Clin. Neurosci. 5: 30-36.
3. Boer, H., Holland, A., Whittington, J., Butler, J., Webb, T. and Clarke, D. 2002. Psychotic illness in people with Prader Willi syndrome due to chromosome 15 maternal uniparental disomy. Lancet 359: 135-136.
4. Midla, G.S. 2008. Diagnosis and management of patients with Marfan syndrome. JAAPA 21: 21-25.
5. Dan, B. 2009. Angelman syndrome: current understanding and research prospects. Epilepsia 50: 2331-2339.
6. Ferrer-Bolufer, I., Dalmau, J., Quiroga, R., Oltra, S., Orellana, C., Monfort, S., Roselló, M., De La Osa, A. and Martinez, F. 2009. Tyrosinemia type 1 and Angelman syndrome due to paternal uniparental isodisomy 15. J. Inherit. Metab. Dis. E-published.
7. Wawrzik, M., Unmehopa, U.A., Swaab, D.F., van de Nes, J., Buiting, K. and Horsthemke, B. 2010. The C15orf2 gene in the Prader-Willi syndrome region is subject to genomic imprinting and positive selection. Neurogenetics 11: 153-161.

CHROMOSOMAL LOCATION

Genetic locus: AGBL1 (human) mapping to 15q25.3.

SOURCE

CCP4 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CCP4 of human origin.

STORAGE

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

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-246222 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CCP4 (S-17) is recommended for detection of CCP4 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); non cross-reactive with other CCP family members.

CCP4 (S-17) is also recommended for detection of CCP4 in additional species, including equine.

Suitable for use as control antibody for CCP4 siRNA (h): sc-90208, CCP4 shRNA Plasmid (h): sc-90208-SH and CCP4 shRNA (h) Lentiviral Particles: sc-90208-V.

Molecular Weight of CCP4 isoforms: 120/87/91 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.

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.