SANTA CRUZ BIOTECHNOLOGY, INC.

Osgep (H-247): sc-366074

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

O-sialoglycoprotein endopeptidases cleave the polypeptide backbone of membrane glycoproteins that contain clusters of O-linked sialoglycans. Osgep (O-sialoglycoprotein endopeptidase), also known as GCPL1, is a 335 amino acid protein that is a member of the peptidase M22 family. Osgep specifically cleaves the 31-Arg-I-Asp-32 bond in glycophorin A, but it does not cleave desialylated glycoproteins, unglycosylated proteins or glycoproteins that are only N-glycosylated. Though ubiquitously expressed at low levels, highest levels of Osgep are found in liver, skeletal muscle and kidney. The gene encoding Osgep maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder a1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

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2. Ikeda, S., et al. 2002. Identification of the functional elements in the bidirectional promoter of the mouse O-sialoglycoprotein endopeptidase and APEX nuclease genes. Biochem. Biophys. Res. Commun. 296: 785-791.
3. Seki, Y., et al. 2002. Sequencing analysis of a putative human O-sialoglycoprotein endopeptidase gene (OSGEP) and analysis of a bidirectional promoter between the OSGEP and APEX genes. Gene 285: 101-108.
4. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
5. Godbolt, A.K., et al. 2004. A presenilin 1 R278I mutation presenting with language impairment. Neurology 63: 1702-1704.
6. Ng, A.P., et al. 2006. Cleavage of misfolded nuclear receptor corepressor confers resistance to unfolded protein response-induced apoptosis. Cancer Res. 66: 9903-9912.
7. Stolk, J., et al. 2006. α1-antitrypsin deficiency: current perspective on research, diagnosis, and management. Int. J. Chron. Obstruct. Pulmon. Dis. 1: 151-160.

CHROMOSOMAL LOCATION

Genetic locus: OSGEP (human) mapping to 14q11.2; Osgep (mouse) mapping to 14 C1.

SOURCE

Osgep (H-247) is a rabbit polyclonal antibody raised against amino acids 89-335 mapping at the C-terminus of Osgep 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.

APPLICATIONS

Osgep (H-247) is recommended for detection of Osgep 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).

Osgep (H-247) is also recommended for detection of Osgep in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Osgep siRNA (h): sc-92142, Osgep siRNA (m): sc-151331, Osgep shRNA Plasmid (h): sc-92142-SH, Osgep shRNA Plasmid (m): sc-151331-SH, Osgep shRNA (h) Lentiviral Particles: sc-92142-V and Osgep shRNA (m) Lentiviral Particles: sc-151331-V.

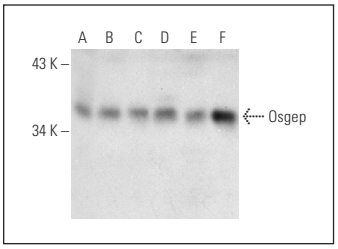
Molecular Weight of Osgep: 36 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, PC-3 cell lysate: sc-2220 or JAR cell lysate: sc-2276.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Osgep (H-247): sc-366074. Western blot analysis of Osgep expression in Ramos (**A**), JAR (**B**), HeLa (**C**), PC-3 (**D**), SK-BR-3 (**E**) and PC-12 (**F**) whole cell lysates.

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.