SANTA CRUZ BIOTECHNOLOGY, INC.

OPLAH (S-17): sc-87345

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The γ-glutamyl cycle involves a series of reactions that are necessary for the synthesis and metabolism of glutathione (GST), which is crucial for regulating amino acid transport. OPLAH [5-oxoprolinase (ATP-hydrolysing)], also known as OPLA, 5-oxo-L-prolinase, 5-Opase or DKFZp434H244OPLA, is an enzyme that plays an important role in the γ-glutamyl cycle by catalyzing the cleavage of 5-oxo-L-proline to form L-glutamate in a reaction coupled to the hydrolysis of ATP to ADP and inorganic phosphate. OPLAH is a 1,288 amino acid protein that exists as a homodimer and belongs to the oxoprolinase family. Expressed at highest levels in kidney, OPLAH has also been found at lower levels in lung, breast, colon and ovary. The gene encoding OPLAH maps to human chromosome 8, which consists of nearly 146 million base pairs, encodes over 800 genes and is associated with a variety of diseases and malignancies including schizophrenia, bipolar disorder, trisomy 8, Pfeiffer syndrome and congenital hypothyroidism.

CHROMOSOMAL LOCATION

Genetic locus: OPLAH (human) mapping to 8q24.3; Oplah (mouse) mapping to 15 D3.

SOURCE

OPLAH (S-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of OPLAH of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87345 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

OPLAH (S-17) is recommended for detection of OPLAH 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).

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

Suitable for use as control antibody for OPLAH siRNA (h): sc-77750, OPLAH siRNA (m): sc-151309, OPLAH shRNA Plasmid (h): sc-77750-SH, OPLAH shRNA Plasmid (m): sc-151309-SH, OPLAH shRNA (h) Lentiviral Particles: sc-77750-V and OPLAH shRNA (m) Lentiviral Particles: sc-151309-V.

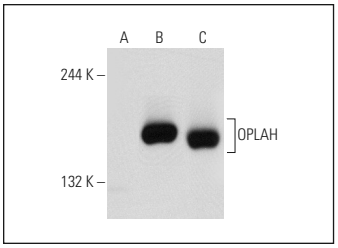
Molecular Weight of OPLAH: 137 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or OPLAH (h2): 293T Lysate: sc-112803.

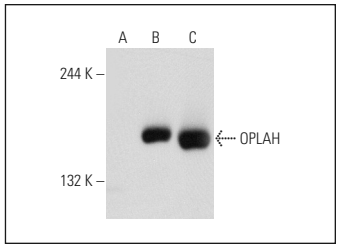
RECOMMENDED SECONDARY REAGENTS

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



OPLAH (S-17): sc-87345. Western blot analysis of OPLAH expression in non-transfected 293T: sc-117752 (**A**), human OPLAH transfected 293T: sc-112803 (**B**) and K-562 (**C**) whole cell lysates.



OPLAH (S-17): sc-87345. Western blot analysis of OPLAH expression in non-transfected 293T: sc-117752 (**A**), human OPLAH transfected 293T: sc-112637 (**B**) and K-562 (**C**) 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.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **OPLAH (C-6): sc-393570** or **OPLAH (E-10): sc-271807**, our highly recommended monoclonal alternatives to OPLAH (S-17).