

## LYAG (P-15): sc-49440

### BACKGROUND

Lysosomal  $\alpha$ -glucosidase (LYAG), also designated acid  $\alpha$ -glucosidase or acid maltase, is essential for the degradation of glycogen to glucose in lysosomes. LYAG is a protein belonging to the glycosyl hydrolase 31 family and resides solely in the lysosome. After translation, LYAG undergoes proteolytic processing to form two lengths of lysosomal  $\alpha$ -glucosidase, and both N-terminal and C-terminal processing occur. Conduritol B epoxide (CBE) is a competitive inhibitor of LYAG. Defects in GAA, the gene encoding for LYAG, may cause Pompe disease, an autosomal recessive disorder characterized by cardiorespiratory insufficiency and glycogen accumulation in muscle tissues, causing muscular weakness. Mutations on the LYAG gene also cause glycogen storage disease II (GSD-II).

### CHROMOSOMAL LOCATION

Genetic locus: GAA (human) mapping to 17q25.3; Gaa (mouse) mapping to 11 E2.

### SOURCE

LYAG (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LYAG of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49440 P, (100  $\mu$ g 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.

### APPLICATIONS

LYAG (P-15) is recommended for detection of precursor and mature lysosomal  $\alpha$ -glucosidase (LYAG) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

LYAG (P-15) is also recommended for detection of precursor and mature lysosomal  $\alpha$ -glucosidase (LYAG) in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for LYAG siRNA (h): sc-60974, LYAG siRNA (m): sc-60975, LYAG shRNA Plasmid (h): sc-60974-SH, LYAG shRNA Plasmid (m): sc-60975-SH, LYAG shRNA (h) Lentiviral Particles: sc-60974-V and LYAG shRNA (m) Lentiviral Particles: sc-60975-V.

Molecular Weight of LYAG cleavage fragments: 70/76 kDa.

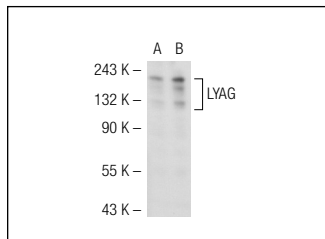
Molecular Weight of LYAG: 110 kDa.

Positive Controls: LYAG (h): 293T Lysate: sc-115825 or COLO 320DM cell lysate: sc-2226.

### 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



LYAG (P-15): sc-49440. Western blot analysis of LYAG expression in non-transfected: sc-117752 (A) and human LYAG transfected: sc-115825 (B) 293T whole cell lysates.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **LYAG (G-7): sc-373745**, our highly recommended monoclonal alternative to LYAG (P-15).