

Atg4D (222CT15.4.1): sc-517312

BACKGROUND

Autophagy, a process that results in the lysosomal-dependent degradation of cytosolic compartments, is carried out by the autophagosome, which is a double-membrane vesicle whose formation is catalyzed by several autophagy-related gene (Atg) proteins. Atg4D (autophagy-related gene 4D), also known as APG4D or AUTL4, is a 474 amino acid protein that localizes to the cytoplasm and belongs to the C-54 family of cysteine proteases. Expressed predominantly in skeletal muscle, but also present in testis, Atg4D functions as a cysteine protease that is required for autophagy and functions to specifically cleave the C-terminal region of target proteins, thereby allowing the target proteins to bind to autophagosomes. The enzymatic activity of Atg4D is inhibited by N-ethylmaleimide, a thiol reactive compound that is capable of modifying cysteine residues in proteins and peptides.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ATG4D (human) mapping to 19p13.2.

SOURCE

Atg4D (222CT15.4.1) is a mouse monoclonal antibody raised against a recombinant protein corresponding to Atg4D of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Atg4D (222CT15.4.1) is recommended for detection of Atg4D of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Atg4D siRNA (h): sc-97728, Atg4D shRNA Plasmid (h): sc-97728-SH and Atg4D shRNA (h) Lentiviral Particles: sc-97728-V.

Molecular Weight of Atg4D: 53 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

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 for detailed protocols and support products.