

# Thimet oligopeptidase (Q-17): sc-30578

## BACKGROUND

Thimet oligopeptidase, also designated soluble metallo-endopeptidase, is a cytoplasmic protein belonging to the peptidase M3 family. The gene for the protein maps against chromosome 19q13.3. Thimet oligopeptidase can degrade the  $\beta$ -Amyloid precursor protein and generate amyloidogenic fragments. It is important in cytoplasmic peptide degradation and involved in metabolism of neuropeptides that are less than 20 amino acids in length. Thimet oligopeptidase is highly expressed in testis but can also be detected in liver, lung and kidney.

## REFERENCES

1. Pierotti, A., et al. 1990. Molecular cloning and primary structure of rat testes metalloendopeptidase EC 3.4.24.15. *Biochemistry* 29: 10323-10329.
2. McKie, N., et al. 1993. Thimet oligopeptidase: similarity to "soluble angiotensin II-binding protein" and some corrections to the published amino acid sequence of the rat testis enzyme. *Biochem. J.* 295: 57-60.
3. McCool, S., et al. 2000. Expression of the Thimet oligopeptidase gene is regulated by positively and negatively acting elements. *DNA Cell Biol.* 19: 729-738.
4. Edbauer, D., et al. 2002. Insulin-degrading enzyme rapidly removes the  $\beta$ -Amyloid precursor protein intracellular domain (AICD). *J. Biol. Chem.* 277: 13389-13393.
5. Oliveira, V., et al. 2002. Temperature and salts effects on the peptidase activities of the recombinant metallooligopeptidases neurolysin and Thimet oligopeptidase. *Eur. J. Biochem.* 269: 4326-4334.

## CHROMOSOMAL LOCATION

Genetic locus: THOP1 (human) mapping to 19q13.3; Thop1 (mouse) mapping to 10 C1.

## SOURCE

Thimet oligopeptidase (Q-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Thimet oligopeptidase of rat 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-30578 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.

## PROTOCOLS

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

## APPLICATIONS

Thimet oligopeptidase (Q-17) is recommended for detection of Thimet oligopeptidase of mouse, rat and, to a lesser extent, 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).

Thimet oligopeptidase (Q-17) is also recommended for detection of Thimet oligopeptidase in additional species, including bovine and porcine.

Suitable for use as control antibody for Thimet oligopeptidase siRNA (h): sc-72152, Thimet oligopeptidase siRNA (m): sc-72153, Thimet oligopeptidase shRNA Plasmid (h): sc-72152-SH, Thimet oligopeptidase shRNA Plasmid (m): sc-72153-SH, Thimet oligopeptidase shRNA (h) Lentiviral Particles: sc-72152-V and Thimet oligopeptidase shRNA (m) Lentiviral Particles: sc-72153-V.

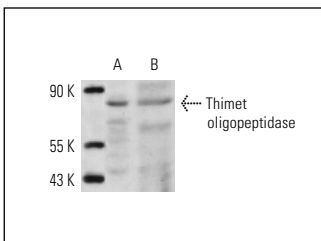
Molecular Weight of Thimet oligopeptidase: 74 kDa.

Positive Controls: mouse cerebellum extract: sc-2403, rat brain extract: sc-2392 or mouse brain extract: sc-2253.

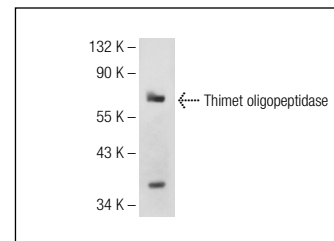
## RECOMMENDED SECONDARY REAGENTS

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



Thimet oligopeptidase (Q-17): sc-30578. Western blot analysis of Thimet oligopeptidase expression in rat testis (A) and mouse testis (B) tissue extracts.



Thimet oligopeptidase (Q-17): sc-30578. Western blot analysis of Thimet oligopeptidase expression in K-562 whole cell lysate.

## RESEARCH USE

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