

ASTL (G-18): sc-107341

BACKGROUND

ASTL (astacin-like metalloendopeptidase), also known as ovastacin, is a 435 amino acid protein that belongs to the astacin family of metalloproteases. The human ASTL, which shares a 78% sequence identity with mouse ASTL, contains an N-terminal signal peptide, a prodomain, a zinc-dependent metalloprotease domain and a C-terminal extension that is likely to be heavily O-glycosylated. Highly expressed in unfertilized oocytes, ASTL expression drops to undetectable levels upon fertilization. ASTL has also been shown to be under hormonal regulation, as superovulation caused a dramatic increase in the expression of ASTL. The catalytic activity of ASTL is inhibited by EDTA and the wide spectrum metalloproteinase inhibitor batimastat (BB-94). The gene encoding ASTL maps to chromosome 2q11.2. Two isoforms of ASTL2 exist as a result of alternative splicing events.

REFERENCES

1. Stöcker, W., et al. 1993. Implications of the three-dimensional structure of astacin for the structure and function of the astacin family of zinc-endopeptidases. *Eur. J. Biochem.* 214: 215-231.
2. Bond, J.S. and Beynon, R.J. 1995. The astacin family of metalloendopeptidases. *Protein Sci.* 4: 1247-1261.
3. Quesada, V., et al. 2004. Identification and characterization of human and mouse ovastacin: a novel metalloproteinase similar to hatching enzymes from arthropods, birds, amphibians, and fish. *J. Biol. Chem.* 279: 26627-26634.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608860. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Semenova, S.A. and Rudenskaia, G.N. 2008. The astacin family of metalloproteinases. *Biomed. Khim.* 54: 531-554.
6. Sterchi, E.E. 2008. Special issue: metzincin metalloproteinases. *Mol. Aspects Med.* 29: 255-257.

CHROMOSOMAL LOCATION

Genetic locus: *Astl* (mouse) mapping to 2 F1.

SOURCE

ASTL (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ASTL of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107341 P, (100 µg 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

ASTL (G-18) is recommended for detection of ASTL of mouse and rat 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).

Suitable for use as control antibody for ASTL siRNA (m): sc-141309, ASTL shRNA Plasmid (m): sc-141309-SH and ASTL shRNA (m) Lentiviral Particles: sc-141309-V.

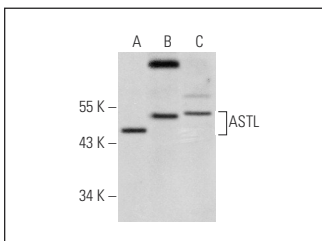
Molecular Weight of ASTL: 46 kDa.

Positive Controls: mouse ovary extract: sc-2404, NIH/3T3 whole cell lysate: sc-2210 or rat ovary extract: sc-2399.

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



ASTL (G-18): sc-107341. Western blot analysis of ASTL expression in rat ovary (A) and mouse ovary (B) tissue extracts and NIH/3T3 whole cell lysate (C).

RESEARCH USE

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

MONOS
Satisfaction
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Try **ASTL (D-8): sc-514054** or **ASTL (F-10): sc-514391**, our highly recommended monoclonal alternatives to ASTL (G-18).