

ASTL (F-10): sc-514391

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 ASTL 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.
7. Sterchi, E.E., et al. 2008. Meprins, membrane-bound and secreted astacin metalloproteinases. *Mol. Aspects Med.* 29: 309-328.

CHROMOSOMAL LOCATION

Genetic locus: ASTL (human) mapping to 2q11.1; Astl (mouse) mapping to 2 F1.

SOURCE

ASTL (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 419-435 at the C-terminus of ASTL of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514391 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ASTL (F-10) is recommended for detection of ASTL of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (h): sc-94887, ASTL siRNA (m): sc-141309, ASTL shRNA Plasmid (h): sc-94887-SH, ASTL shRNA Plasmid (m): sc-141309-SH, ASTL shRNA (h) Lentiviral Particles: sc-94887-V and ASTL shRNA (m) Lentiviral Particles: sc-141309-V.

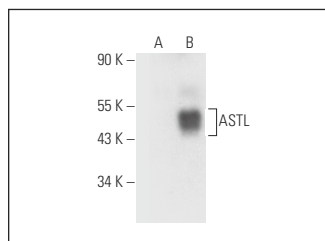
Molecular Weight of ASTL: 46 kDa.

Positive Controls: ASTL (m): 293T Lysate: sc-126457 or OVCAR-3 whole cell lysate.

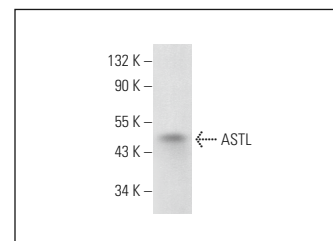
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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 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.

DATA



ASTL (F-10): sc-514391. Western blot analysis of ASTL expression in non-transfected: sc-117752 (A) and mouse ASTL transfected: sc-126457 (B) 293T whole cell lysates.



ASTL (F-10): sc-514391. Western blot analysis of ASTL expression in OVCAR-3 whole cell lysate.

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.