

SerpinA6 (Y19-E): sc-100851

BACKGROUND

The serine proteinase inhibitors (serpins) comprise a superfamily of proteins with a diverse set of functions, including the control of blood coagulation, complement activation, programmed cell death and tissue development. SerpinA6, also known as CBG or Transcortin, is a 405 amino acid α -globulin secreted protein that belongs to the serpin family. Synthesized in the liver and present in glyocorticoid responsive cells, SerpinA6 functions as the primary transport protein for progestins and glucorticoids within the blood. Additionally, SerpinA6 has corticosteroid-binding properties through which it can regulate the physiological binding of serum cortisol within the cell. Defects in the gene encoding SerpinA6 are the cause of corticosteroid-binding globulin deficiency (CBG deficiency), a rare disorder characterized by reduced corticosteroid-binding rates that result in hypo/hypertension and muscle fatigue.

REFERENCES

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2. Van Baelen, H., et al. 1993. Decreased cortisol-binding affinity of transcortin Leuven is associated with an amino acid substitution at residue 93. *Steroids* 58: 275-277.
3. Emptoz-Bonneton, A., et al. 2000. Novel human corticosteroid-binding globulin variant with low cortisol-binding affinity. *J. Clin. Endocrinol. Metab.* 85: 361-367.
4. Barat, P., et al. 2005. Corticosteroid binding globulin gene polymorphism influences cortisol driven fat distribution in obese women. *Obes. Res.* 13: 1485-1490.
5. Torpy, D.J. and Ho, J.T. 2007. Corticosteroid-binding globulin gene polymorphisms: clinical implications and links to idiopathic chronic fatigue disorders. *Clin. Endocrinol.* 67: 161-167.
6. Seixas, S., et al. 2007. Sequence diversity at the proximal 14q32.1 serpin subcluster: evidence for natural selection favoring the pseudogenization of SerpinA2. *Mol. Biol. Evol.* 24: 587-598.
7. Buss, C., et al. 2007. Haploinsufficiency of the SerpinA6 gene is associated with severe muscle fatigue: A *de novo* mutation in corticosteroid-binding globulin deficiency. *J. Neural Transm.* 114: 563-569.

CHROMOSOMAL LOCATION

Genetic locus: SERPINA6 (human) mapping to 14q32.13.

SOURCE

SerpinA6 (Y19-E) is a mouse monoclonal antibody raised against recombinant SerpinA6 of human origin.

PRODUCT

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

APPLICATIONS

SerpinA6 (Y19-E) is recommended for detection of SerpinA6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SerpinA6 siRNA (h): sc-76474, SerpinA6 shRNA Plasmid (h): sc-76474-SH and SerpinA6 shRNA (h) Lentiviral Particles: sc-76474-V.

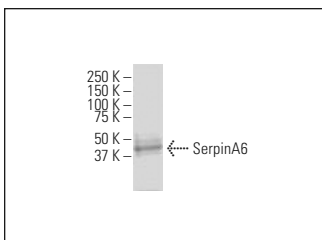
Molecular Weight of SerpinA6: 43 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



SerpinA6 (Y19-E): sc-100851. Western blot analysis of SerpinA6 expression in HL-60 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Charni, M., et al. 2016. Novel p53 target genes secreted by the liver are involved in non-cell-autonomous regulation. *Cell Death Differ.* 23: 509-520.

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.