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SHBG Antibody

Catalog # ASC11839

Product Information

Application	WB, IF, E
Primary Accession	P04278
Other Accession	NP_001031, 7382460
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	43779
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LIN54 antibody can be used for detection of LIN54 by Western blot at 1 - 2 g/ml. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	6462
Other Names	Sex hormone-binding globulin, SHBG, Sex steroid-binding protein, SBP, Testis-specific androgen-binding protein, ABP, Testosterone-estradiol-binding globulin, TeBG, Testosterone-estrogen-binding globulin, SHBG
Target/Specificity	SHBG; SHBG antibody is human, mouse, and rat reactive. At least three isoforms of SHBG are known to exist; this antibody will detect all three isoforms.
Reconstitution & Storage	SHBG antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	SHBG Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SHBG (HGNC:10839)
Function	Functions as an androgen transport protein, but may also be involved in receptor mediated processes. Each dimer binds one molecule of steroid. Specific for 5-alpha-dihydrotestosterone, testosterone, and 17-beta-estradiol. Regulates the plasma metabolic clearance rate of steroid hormones by controlling their plasma concentration.
Cellular Location	Secreted. Note=In testis, it is synthesized by the Sertoli cells, secreted into the lumen of the seminiferous tubule and transported to the epididymis.

Tissue Location	Isoform 1 and isoform 2 are present in liver and testis

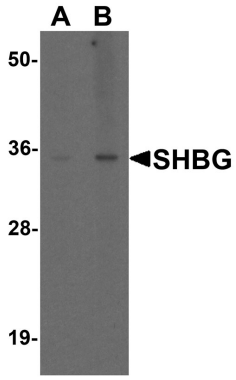
Background

SHBG is a steroid binding protein that was first described as a plasma protein secreted by the liver and is thought to participate in the regulation of steroid responses. SHBG transports androgens and estrogens in the blood, binding each steroid molecule as a dimer formed from identical or nearly identical monomers (1). Low plasma SHBG levels are associated with obesity, abdominal adiposity, metabolic syndrome, and predict the development of type 2 diabetes (2,3). Polymorphisms in this gene have been associated with polycystic ovary syndrome and type 2 diabetes mellitus (4).

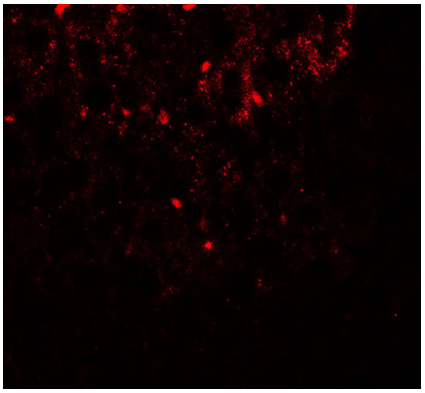
References

Siiteri PK, Murai JT, Hammond GL, et al. The serum transport of steroid hormones. Recent Prog. Horm. Res. 1982; 38:457-510.
Li C, Ford ES, Li B, et al. Association of testosterone and sex hormone-binding globulin with metabolic syndrome and insulin resistance in men. Diabetes Care 2010; 33:1618-24.
Ding EL, Song Y, Manson JE, et al. Sex hormone-binding globulin and risk of type 2 diabetes in women and men. N. Engl. J. Med. 2009; 361:1152-63.
Hacihanefioglu B, Aybey B, Hakan Ozon Y, et al. Association of anthropometric, androgenic and insulin-related features with polymorphisms in exon 8 of SHBG gene in women with polycystic ovary syndrome. Gynecol. Endocrinol. 2013; 29:361-4.

Images



Western blot analysis of SHBG in human liver tissue lysate with SHBG antibody at (A) 1 and (B) 2 µg/ml.



Immunofluorescence of SHBG in mouse liver tissue with SHBG antibody at 20 µg/ml.