

Progesterone (11P14): sc-53423

BACKGROUND

Progesterone is a C-21 steroid hormone that belongs to a class of hormones called progestogens; it is the major naturally occurring human progestogen. Progesterone functions in the female menstrual cycle, pregnancy and embryogenesis, and is produced in the adrenal glands, gonads, brain and, during pregnancy, in the placenta. Like other steroid hormones, Progesterone is synthesized from a derivative of cholesterol called pregnenolone. The Progesterone receptor a membrane-bound member of the steroid receptor superfamily, mediates the physiologic effects of Progesterone. The Progesterone receptor gene (PGR) uses separate promoters and translational start sites to produce two almost identical isoforms, PRA and PRB, which are distinct transcription factors that mediate their own response genes and physiologic effects with little overlap. They are composed of a modulating N-terminal domain, a DNA binding domain and a C-terminal steroid binding domain.

REFERENCES

1. Kalkhoff, R.K., et al. 1970. Progesterone, pregnancy and the augmented plasma insulin response. *J. Clin. Endocrinol. Metab.* 31: 24-28.
2. Fantl, V.E., et al. 1982. The production of high affinity monoclonal antibodies to Progesterone. *J. Steroid Biochem.* 17: 125-130.
3. Horwitz, K.B., et al. 1985. Progestin action and Progesterone receptor structure in human breast cancer: a review. *Recent Prog. Horm. Res.* 41: 249-316.
4. Jung-Testas, I., et al. 1989. Neurosteroids: biosynthesis of pregnenolone and Progesterone in primary cultures of rat glial cells. *Endocrinology* 125: 2083-2091.
5. Prior, J.C. 1990. Progesterone as a bone-trophic hormone. *Endocr. Rev.* 11: 386-398.
6. Williams, S.P. and Sigler, P.B. 1998. Atomic structure of Progesterone complexed with its receptor. *Nature* 393: 392-396.

SOURCE

Progesterone (11P14) is a mouse monoclonal antibody raised against 11 α -Hydroxyprogesterone conjugated to BSA.

PRODUCT

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

Progesterone (11P14) is available conjugated to agarose (sc-53423 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53423 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53423 PE), fluorescein (sc-53423 FITC), Alexa Fluor[®] 488 (sc-53423 AF488), Alexa Fluor[®] 546 (sc-53423 AF546), Alexa Fluor[®] 594 (sc-53423 AF594) or Alexa Fluor[®] 647 (sc-53423 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53423 AF680) or Alexa Fluor[®] 790 (sc-53423 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

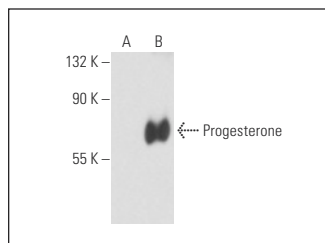
Progesterone (11P14) is recommended for detection of Progesterone of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Progesterone: 99 kDa.

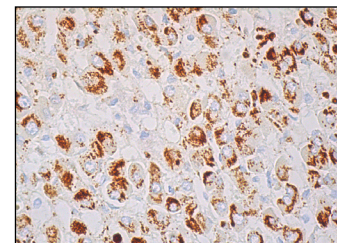
RECOMMENDED SUPPORT REAGENTS

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



Progesterone (11P14): sc-53423. Western blot analysis of control BSA (A) and Progesterone-BSA conjugate (B).



Progesterone (11P14): sc-53423. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detection reagents used: m-IgG κ BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

1. He, D.E., et al. 2015. Clinicopathological characteristics and prognosis of breast cancer patients with type 2 diabetes mellitus. *Mol. Clin. Oncol.* 3: 607-612.

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.