

Progesterone (XM207): sc-52169

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 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.
7. Szekeres-Bartho, J., et al. 1999. The role of γ/δ T cells in Progesterone-mediated immunomodulation during pregnancy: a review. *Am. J. Reprod. Immunol.* 42: 44-48.
8. Spencer, T.E. and Bazer, F.W. 2002. Biology of Progesterone action during pregnancy recognition and maintenance of pregnancy. *Front. Biosci.* 7: 1879-1898.
9. Schumacher, M., et al. 2004. Local synthesis and dual actions of Progesterone in the nervous system: neuroprotection and myelination. *Growth Horm. IGF Res.* 14: S18-S33.

SOURCE

Progesterone (XM207) is a mouse monoclonal antibody raised against purified human progesterone conjugated to BSA.

PRODUCT

Each vial contains 100 μ g IgG_{2b} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Progesterone (XM207) is recommended for detection of progesterone of mammalian origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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 or our catalog for detailed protocols and support products.