



RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet

SHEEP ANTI 17-BETA-ESTRADIOL

With HRP-conjugated secondary antibody

Catalog No.
DS-PB-00016

Species:
Broad

Isotype:
Sheep IgG

Description

17 β Estradiol is a potent mammalian estrogenic hormone that is produced in the ovaries (by the granulosa cells), in the placenta, testis and possibly the adrenal cortex. The hormone is synthesized enzymatically from acetate, cholesterol, progesterone and testosterone. In addition to anatomic and physiological regulation of reproduction and secondary sex characteristics, it also influences activities such as bone growth, brain development and maturation and the intracellular concentrations of calcium and certain second messenger molecules. Research demonstrates salutary effects of 17 β estradiol following trauma-hemorrhage on different cell types. 17 β estradiol also induces improved circulation through relaxation of the aorta and has an anti-apoptotic effect on endothelial cells. 17 β estradiol is also implicated in the attenuation of H₂O₂-induced apoptosis via ER-dependent activation of caspase-9 and -3 in rat endothelial cells through mitochondria.

Applications

Table Summary of antibody applications and working conditions

Options Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA	•			1/5000 - 1/40,000
Western Blotting			•	
Immunohistology - frozen			•	
Immunohistology - paraffin			•	
Immunohistology - resin			•	
Immunoprecipitation			•	
Flow Cytometry			•	
Immunofluorescence staining			•	
Neutralization			•	

Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application.

The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.



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Preparation

Immunogen was Estradiol conjugated to bovine serum albumin. The IgG fraction of immunized sera was purified by ammonium sulphate precipitation

Specificity

It recognizes 17 beta estradiol, a mammalian estrogenic hormone, produced in the ovaries, placenta and testis that has a role in normal sexual development and the regulation of the menstrual cycle.

The following cross reactivities have been observed:

17-beta Oestradiol 100%

Oestrone 14%

Oestriol 5%

Aldosterone, Cortisol, Corticosterone, DHEA, Deoxycorticosterone, Pregnenolone, Progesterone, 17OH-P and Testosterone all <0.01%

Reconstitution

Supplied as 250ul of purified antibody. It is reconstituted with 50ul of sterile PBS. Its final concentration is 5.0 mg/ml. **Please avoid freeze-thaw cycles.**

Secondary Antibody Applications

Options Functions	YES	NO	Not determined	Recommended Work dilution or concentration
Immunoassay (ELISA, Western blot)	.			1:5000-1:10000

Storage

Store at -20°C, if not intended for use within a month. Keep it at 4°C and minimize freezing and thawing when use.

Reference

Gourdy, P., Mallat, Z., Castano, C., Garmy-Susini, B., Mac Gregor, J.L., Tedgui, A., Arnal, J.F. and Bayard, F. 2002. The atheroprotective effect of 17 β -estradiol is not altered in P-selectin- or ICAM-1-deficient hypercholesterolemic mice. *Atherosclerosis* 166: 41-48.

Massart, F., Paolini, S., Piscitelli, E., Brandi, M.L. and Solaini, G. 2003. Dosedependent inhibition of mitochondrial ATP synthase by 17 β -estradiol. *Gynecol. Endocrin.* 16: 373-377.

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