

**Reporting Title:** Free Estradiol with SHBG  
**Performing Location:** Esoterix Endocrinology

**Specimen Requirements:**  
Draw blood in a plain red-top tube (serum gel tube is acceptable). Spin down, pour off into plastic vial within 45 minutes of collection, and send 3 mL serum frozen.

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	180 days	
	Ambient	48 hours	
	Refrigerated	48 hours	

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
Z0228	Free Estradiol, Percent	Alphanumeric		14960-9
Z0229	Free Estradiol, Serum	Alphanumeric		2240-0
Z0230	Sex Hormone Binding Globulin (SHBG)	Alphanumeric		13967-5
Z0259	Estradiol, Serum	Alphanumeric		35384-7

LOINC® and CPT codes are provided by the performing laboratory.

**Supplemental Report:**  
No

**CPT Code Information:**  
82681 – Free Estradiol  
84270 - Sex Hormone binding globulin  
82670 - Estradiol

**Reference Values:**  
**Estradiol, Serum MS**  
Units: pg/mL

Age

Range

Newborn  
Levels are markedly elevated at birth and fall rapidly during the first week to prepubertal values of <15.

Males <6 m  
Levels increase to 10 - 32 between 30 and 60 days, then decline to prepubertal levels of <15 by six months.

Females <1 y

Levels increase to 5.0 - 50 between 30 and 60 days, then decline to prepubertal levels of <15 during the first year.

Prepubertal	<15
Adult Males	8.0 - 35
Adult Females	
Follicular	30 - 100
Luteal	70 - 300
Postmenopausal	<15

Free Estradiol, Percent

Units: %

Age	Range
Adult Males	1.7 - 5.4
Adult Females	1.6 - 3.6

Free Estradiol, Serum

Units: pg/mL

Age	Range
Adult Males	0.2 - 1.5
Adult Females	0.6 - 7.1

Sex Hormone Binding Globulin

Units: nmol/L

Age	Range
Infants (1 - 23m)	60.0 - 252.0
Prepubertal	72.0 - 220.0
Pubertal	
Males	16.0 - 100.0
Females	36.0 - 125.0
Adult Males	
20 - 49 y	16.5 - 55.9
>49y	19.3 - 76.4
Adult Females	
20 - 49y	24.6 - 122.0
>49y	17.3 - 125.0