MAYO CLINIC
Mayo Medical Laboratories

Test Definition: FFES

Estradiol Free, Serum (includes Estradiol and SHBG)

Reporting Title: Free Estradiol
Performing Location: Esoterix Endocrinology

Specimen Requirements:

Draw blood in a plain, red-top tube or serum gel tube. Spin down, pour off into plastic vial within 1 hour of collection, and send 3 mL serum frozen.

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Ambient	5 days
	Refrigerated	5 days

Result Codes:

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

Components:

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately
Billing only	unlisted chemistry procedure	1	84999		
Billing only	Sex Hormone Binding Glob	1	84270		
Billing only	Estradiol	1	82670		

Reference Values:

Free Estradiol, Percent
Reference Ranges (%)

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

Free Estradiol, Serum

Reference Ranges (pg/mL)

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

Sex Hormone Binding Globulin (SHBG), Serum
Reference Ranges (nmol/L)

Age	Range
1 - 23m	60 - 252
Prepubertal (24m - 8y)	72 - 220
Pubertal	
Males	16 - 100
Females	36 - 125
Adult Males	20 - 60
Adult Females	
Premenopausal	40 - 120
Postmenopausal	28 - 112

Estradiol, Serum
Reference Ranges (pg/mL)

Age	Range
Newborn	Levels are markedly elevated at birth and fall rapidly during the first week to prepubertal values of <15
Males <6m	Levels increase to 10 - 32 between 30 and 60 days, hen decline to prepubertal levels of <15 by six months.
Females <1y	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

Test Performed By: Esoterix Endocrinology
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