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Table 1: Fasting Insulin Resistance Index (FIRI) values

Index Value	Indication
Less than 2.67	Normal
Between 2.93 and 3.12	Typically found in person who are obese and may indicate insulin resistance
Above 3.22	Indicates pre diabetes or Type-II diabetes

Table 2: Antibody for Western Blotting

Name of Antibody	Company and Catalog No.	Mono/Poly clonal	Mol. Weight (kDa)	Isotype	Dilution	Secondary antibody dilution
PI(3)K p85(19H8)	Cell Signaling #4257	Mono	85	Rabbit	1:1000	1:2500
Insulin Receptor β (4B8)	Cell Signaling #3025	Mono	95	Rabbit	1:1000	1:2500
Phospho IRS-1	Cell Signaling #2381	Poly	180	Rabbit	1:1000	1:2500
Phospho Akt	Cell Signaling #4060	Mono	60	Rabbit	1:2000	1:2500
P38 MAPK	Cell Signaling #9212	Poly	43	Rabbit	1:1000	1:2500
$P_{44/42}$ MAPK (Erk1/2)	Cell Signaling #9102	Poly	42,44	Rabbit	1:1000	1:2500
Protein Kinase C-ζ	Millipore #07-264	Poly	72	Rabbit	1:20,000	1:2500
PPAR-γ	Cell Signaling #2435	Mono	53,57	Rabbit	1:1000	1:2500
StAR (Steroidogenic acute regulatory protein)	gifted by Prof. Stocco	Poly	30	Rabbit	1:1000	1:10,000
CYP11A1	Santacruz		60	Goat	1:1000	1:5000
3β-HSD	Gifted by Prof. Van Luu THE	Poly	35	Rabbit	1:1000	1:10,000
CYP19A1	Cell Signaling	Poly	58	Rabbit	1:1000	1:5000
17β-HSD	Gifted by Prof. Van Luu THE	Poly	35	Rabbit	1:1000	1:10,000
Caspase-3	Thermo	Poly	32	Rabbit	1:500	1:2500

	scientific					
PARP (46D11)	Cell Signaling #9532	Mono	116,89	Rabbit	1:1000	1:2500
Beta Actin	Thermo Scientific #MAI-91399	Mono	43	Mouse	1:10000	1:2500

Table 3: Antibody for Immunocytochemistry

Name of Antibody	Company and Catalog No.	Mono/Poly clonal	Mol. Weight (kDa)	Isotype	Dilution
CYP19A1	Cell Signaling	Poly	58	Rabbit	1:50
17β-HSD	Gifted by Prof. Van Luu THE	Poly	35	Rabbit	1:100
3β-HSD	Gifted by Prof. Van Luu THE	Poly	35	Rabbit	1:100

Table 4: List of primers sequences (Rat) with its amplicon size

Name	Primer (Species-Rat)	Product	Annealing Tm (°C)	Reference (Accession No.)
Bax	5'- AGACACCTGAGCTGACCTTG-3' FP 5'-GTCCCGAAGTAGGAGAGGAG-3' RP	55	301	Sato *et. al*. 1994 ; Tilly *et. al.* 1995
Bcl2	5'-CTGGGGATGACTTCTCTCG-3' FP 5'-GGAGAAATCAAACAGAGGTC-3' RP	55	349	Sato *et. al*. 1994 ; Tilly *et. al.* 1995
CYP19A1	5'GGAATCCATCAAGCAGCATT-3' FP 5'TTCCACCTCCGGATACTCTG-3' RP	58	493	*NM _017085*
StAR	5'AGGCAGGGGGATCTTTCTAA-3'FP 5'TGCCTGACTAGGGTTTCGTT-3'RP	57	330	*NM_031558*
CYP11A1	5'AGATCCCTTCCCCTGGTGACAATG3'FP 5'CCAGGCGCTCCCCAAATACAACA3' RP	61	510	*NM_017286*
17β-HSD	5'CCTCTTTCGCCACTATCAGC-3' FP 5'GGAGACAAATGAGGGCTC-3' RP	58	400	AF035156
3β-HSD	5'ATGCCCAGTACCTGAGGAGA-3' FP 5'TTGAGGGCCGCAAGTATC-3' RP	61	427	M38178
FSH-β	5'TCCAGTAGCCACTGAATGCC 3' FP 5'TTCACCGAAGGAGCAGTAGC 3' RP	59.4	97	M36804
LH-β	Fw 5'GAGAATGAGTTCTGCCCAGTCTG 3' Rv 5'TGGCAGTACTCGAACCATGC3'	59	85	J00749
CYP19 A1	Fw 5' CGTCATGTTGCTTCTCATCG 3' Rv 5'TACCGCAGGCTCTCGTTAAT 3'	57.3	150	M33986
GnRH 1	Fw 5'GGCAAGGAGGAGGATCAAAT 3' Rv 5'GCCCAGCTTCCTCTTCAATC 3'	59.4	121	M31670
FSH-R	Fw 5'CATCACTGTGTCCAAGGCCA 3' Rv 5'TGCGGAAGTTCTTGGTGA 3'	55.9	101	NM_199237.1

LH-R	Fw 5'CTGCGCTGTCCTGGCC 3' Rv 5'CGACCTCATTAAGTCCCCTGAA 3'	60.3	103	

Table 5: Taqman Gene expression probes (Human)

S.No	Name	ID	Cat.No	amplicon length
1	StAR-Steroidogenic Acute Regulatory protein	Hs00986558_g1	4448892	68
2	CYP11A1-Cytochrome P450 side chain cleavage	Hs00897322_g1	4448892	90
3	CYP19A1-Aromatase	Hs00903410_m1	4448892	88
4	**HSD3B2 (3-beta hydroxy steroid dehydrogenase type-2)**	Hs01080264_g1	4448892	77
5	HSD17B1 (17-beta hydroxy steroid dehydrogenase type-1)	Hs00907289_g1	4448892	93

Table 6: List of primers sequences (Human) for fat metabolism with its amplicon size

Gene	Accession number	Sequence (5'→3')	Product size	Annealing Temperature
SREBP-1c (H)	NM_001005291	**F:** TGCATTTTCTGACACGCTTC **R:** CCAAGCTGTACAGGCTCTCC	171	60
ACC-1(H)	NM_198834	**F:** TTTAAGGGGTGAAGAGGGTGC **R:** CCAGAAAGACCTAGCCCTCAAG	171	60
FAS (H)	NM_004104	**F:** CACAGGGACAACCTGGAGTT **R:** ACTCCACAGGTGGGAACAAG	97	60
CPT 1 (H)	NM_001876	**F:** TCGTCACCTCTTCTGCCTTT **R:** ACACACCATAGCCGTCATCA	206	60
Actin-β(H)	NM_001101	**F:** ACTCTTCCAGCCTTCCTTCC **R:** CGTACAGGTCTTTGCGGATG	101	60

Table 7: List of primers sequences (Human) with its amplicon size

Gene	Accession number	Sequence (5'→3')	Product size	Annealing Temperature
IGF-I(H)	NM_000618.3	F: AGCAGTCTTCCAACCCAATTATTTAG R: AGATGCGAGGAGGACATGGT	83	56
IGF-IR (H)	NM_000875.4	F: AAGGCTGTGACCCTCACCAT R: CGATGCTGAAAGAACGTCCAA	118	56
IGF-II(H)	NM_000612.5	F: AGCAGTCTTCCAACCCAATTATTTAG R: GGACTGCTTCCAGGTGTCATATT	189	57
IGF-IIR(H)	NM_000876.2	F: AGCAGTCTTCCAACCCAATTATTTAG R: GAGACAAGTCAACAATAGAGCTTCCA	197	60
FSH-R (H)	NM_000145.3	F: TTTCAAGAACAAGGATCCATTCC R: CCTGGCCCTCAGCTTCTTAA	336	60
LH-R (H)	NM_000233.3	F: TTCAATGGGACGACACTGACTT R: TGTGCATCTTCTCCAGATGTACGT	234	60