

Appendix 4. Genes most affected by retinal conditioned medium in E7 and E14 cultures: Up-regulated genes

E7		E14	
Gene Title	rcSF3/SF3*	Gene Title	rcSF3/SF3*
UNC-93 Homolog A	12.0	<i>Retinoic Acid Receptor, Beta</i> [†]	11.5
Acyl-CoA Synthetase LC 5	11.4	Fantom Protein	6.2
PC-LKC	11.1	Ephrin receptor, EPH A7	5.8
Synaptotagmin VI	10.7	Monocarboxylic transporter, SLC16A9 [†]	4.6
Retinol binding pro 1, RBP 1, cellular [†]	9.9	Gastrointestinal Secretory Pro	4.5
H2B Histone F	9.1	Interleukin 1 Receptor 1 [†]	3.9
Solute Carrier (vesicular monoamine), SLC18A2 [†]	8.6	<i>non-histone chromosome protein</i>	3.8
Calpain 8	8.1	Aldolase B	3.7
Synuclein, Alpha	7.1	<i>Nidogen 1</i>	3.2
Ephrin Receptor, Eph A3	6.8	<i>Golgin-245</i>	3.1
K ⁺ voltage-gated channel, KCNQ1	6.7	<i>Amplified In Breast Cancer-1</i>	2.9
MTPRD protein	6.1	<i>Fibulin 1</i>	2.6
Aldolase B	5.7	<i>Sex determining region Y, SRY-Box 10</i>	2.6
G-pro coupled receptor, GPR30 [†]	5.6	Organic Anion Transport 1A2	2.5
Histone H2B	5.5	<i>Glucagon-like peptide 1 recept, GLP-2R</i> [†]	2.4
Collagen, Type XXIV, Alpha 1 [†]	5.2	<i>Leu-Rich Glioma Inact 1</i>	2.4
Fraser Syndrome 1	5.0	Aldehyde Dehydrogenase 1 L2	2.4
Tripartite Motif-Containing 55	4.9	Na ⁺ Channel, Nonvoltage-Gated 1 Alpha [†]	2.4
Calmodulin-Dependent PDE	4.8	<i>Amplified In Breast Cancer-1</i>	2.3
Organic Anion Transport 1A2	4.6	Desmuslin	2.3
Ephrin receptor, Eph A5	4.6	EF-Hand Domain 1	2.2
Calmodulin-dependent kinase kinase CAMKK Alpha Pro	4.5	Facilitated glucose transporter, SLC2A11 [†]	2.2
Ephrin receptor Eph A7	4.3	<i>NOK Kinase</i>	2.2
Thymidylate Synthetase	4.3	<i>P Protein</i>	2.1
Ca ²⁺ -Depend Secretion Activator	4.1	<i>TNF (Ligand) Superfamily 10</i>	2.1
N-Acetyl-transferase 1	4.1	MOB4A	2.1
Sal-Like 1	4.1	<i>Germinal Histone H4 Gene</i>	2.1
Glutathione S-Transferase A3	4.0	Oral Cancer Overexpressed 1	2.1
Claudin 1 [†]	3.9	Claudin 1 [†]	2.0
Collagen, Type IV, Alpha 1 [†]	3.9	Sodium/sulfate symporter, SLC13A4 [†]	2.0
Myosin Heavy Chain Myr 8 [†]	3.9	<i>Peroxisomal Trans-2-Enoyl-CoA Reductase</i>	2.0
Interleukin 1 Receptor 1 [†]	3.8	Solute Carrier (vesicular monoamine), SLC18A2 [†]	1.9

Calretinin	3.8	Facilitated glucose transporter, SLC2A12 [†]	1.9
Plasticity Related Gene 1	3.8	Mitochondrial Ribosome Recycling Factor	1.8
Glucagon-like peptide 1 receptor, GLP-1	3.8	T-Cell Activation Leucine Repeat-Rich Pro	1.8
Ribokinase	3.8	Hyaluronidase	1.8
Aldehyde Dehydrogenase 1 L2	3.8	<i>PAI-1 mRNA-Binding Pro</i>	1.8
Myosin IIIB [†]	3.7	<i>Glucose-6-Phosphatase, Catalytic, 2</i>	1.7
Rho-GTPase-Activating Protein 6	3.7	<i>LPS-Responsive Vesicle Trafficking</i>	1.7

The 40 identifiable genes that were up-regulated the most by E14 retinal conditioned medium are listed along with the level of expression relative to RPE maintained in basal conditions. Data represent the average of three microarrays that were probed with total RNA from independent experiments. Shading indicates genes that were up-regulated in both E7 and E14 cultures. Italicized entries indicated genes that were regulated to the same or greater extent in E7 cultures as in E14 cultures, but were not among the top 40 regulated genes of E7.

*Expression level in rcSF3 cultures relative to expression in SF3.

[†]genes that are included in the analyses of RPE specific pathways.