**Table S3. Meta signature of third-trimester placental tissue mRNA expression**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene symbol** | **Gene name** | **Chromosomal location** | **Encodes extracellular protein** | **1st trimester expression** | **Number of times present in complete signature** | **Number of times present in any signature** | **Expression in pre-eclampsia** | **References** |
| LEP | leptin | 7q31.3 | + | + | 5 | 12 | Up | **Hoegh 2010, Kang 2011, Reimer 2002, Sitras 2009, Winn 2009,** Enquobahrie 2008, Herse 2007, Järvenpää (combined), Lee 2010, Nishizawa 2007, Nishizawa 2011, Varkonyi 2011 |
| FLT1 | fms-related tyrosine kinase 1 | 13q12 | + | +/- | 4 | 11 | Up | **Centlow 2011, Kang 2011, Sitras 2009, Winn 2009,** Enquobahrie 2008, Herse 2007, Järvenpää (combined), Lee 2010, Nishizawa 2007, Nishizawa 2011, Vaiman 2005 |
| INHBA | inhibin, beta A | 7p15-p13 | + | +/- | 5 | 9 | Up | **Gack 2005, Hoegh 2010, Reimer 2002, Sitras 2009, Winn 2009,** Ahr 2006, Nishizawa 2007, Nishizawa 2011, Pang (combined) |
| ENG | endoglin | 9q34.11 | + | +/- | 5 | 8 | Up | **Gack 2005, Kang 2011, Sitras 2009, Tsai 2011, Winn 2009,** Nishizawa 2007, Nishizawa 2011, Pang (combined) |
| EBI3 | Epstein-Barr virus induced 3 | 19p13.3 | + | + | 3 | 6 | Up\* | **Gack 2005, Kang 2011, Mayor-Lynn 2011,** Enquobahrie 2008, Nishizawa 2007, Nishizawa 2011 |
| INHA | inhibin, alpha | 2q33-q36 | + | +/- | 4 | 6 | Up | **Centlow 2011, Reimer 2002, Sitras 2009, Winn 2009,** Enquobahrie 2008, Nishizawa 2011 |
| SIGLEC6 | sialic acid binding Ig-like lectin 6 | 19q13.3 | + | + | 3 | 6 | Up | **Kang 2011, Sitras 2009, Winn 2009,** Enquobahrie 2008, Vaiman 2005, Varkonyi 2011 |

**Table S3 (continued)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene symbol** | **Gene name** | **Chromosomal location** | **Encodes extracellular protein** | **1st trimester expression** | **Number of times present in complete signature** | **Number of times present in any signature** | **Expression in pre-eclampsia** | **References** |
| BCL6 | B-cell CLL/lymphoma 6 | 3q27 |   | +/- | 3 | 5 | Up | **Reimer 2002, Sitras 2009, Winn 2009,** Enquobahrie 2008, Nishizawa 2011 |
| CGB | chorionic gonadotropin, beta polypeptide | 19q13.32 | + | + | 2 | 5 | Up | **Sitras 2009, Winn 2009,** Heikkila 2005, Nishizawa 2011, Varkonyi 2011 |
| CRH | corticotropin releasing hormone | 8q13 | + | +/- | 2 | 5 | Up\* | **Mayor-Lynn 2011, Winn 2009,** Heikkila 2005, Nishizawa 2007, Nishizawa 2011 |
| HTRA1 | HtrA serine peptidase 1 | 10q26.3 | + | + | 3 | 5 | Up | **Kang 2011, Sitras 2009, Winn 2009,** Heikkila 2005, Nishizawa 2011 |
| PAPPA2 | pappalysin 2 | 1q23-q25 | + | +/- | 3 | 5 | Up\* | **Mayor-Lynn 2011 2011, Tsai 2011, Winn 2009,** Nishizawa 2011, Varkonyi 2011 |
| CYP11A1 | cytochrome P450, family 11, subfamily A, polypeptide 1 | 15q23-q24 |   | + | 3 | 4 | Up\* | **Gack 2005, Kang 2011, Mayor-Lynn 2011,** Enquobahrie 2008 |
| FSTL3 | follistatin-like 3 | 19p13 | + | +/- | 1 | 4 | Up | **Sitras 2009,** Enquobahrie 2008, Herse 2007, Nishizawa 2011 |
| KRT19 | keratin 19 | 17q21.2 |   | +/- | 2  | 4 | Up | **Gack 2005, Sitras 2009,** Nishizawa 2011, Vaiman 2005 |

**Table S3 (continued)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene symbol** | **Gene name** | **Chromosomal location** | **Encodes extracellular protein** | **1st trimester expression** | **Number of times present in complete signature** | **Number of times present in any signature** | **Expression in pre-eclampsia** | **References** |
| SLCO2A1 | solute carrier organic anion transporter family, member 2A1 | 3q21 |   | +/- | 2  | 4 | Up | **Kang 2011, Winn 2009,** Enquobahrie 2008, Nishizawa 2011 |
| SOD1 | superoxide dismutase 1 | 21q22.11 | + | + | 3 | 4 |  – | **Centlow 2011, Gack 2005, Zhou 2006,** Pang (combined) |
| AQP1 | aquaporin 1 | 7p14 |   | +/- | 2  | 3 | Up\* | **Reimer 2002, Tsoi 2003,** Nishizawa 2011 |
| BHLHE40 | basic helix-loop-helix family, member e40 | 3p26 |   | +/- | 1  | 3 | Up | **Sitras 2009,** Nishizawa 2007, Nishizawa 2011 |
| CGA | glycoprotein hormones, alpha polypeptide | 6q12-q21 | + | + | 1 | 3 | Up | **Tsoi 2003,** Heikkila 2005, Vaiman 2005 |
| EZR | ezrin | 6q25.3 |   | +/- | 1 | 3 | Up | **Gack 2005,** Vaiman 2005, Pang (combined) |
| F5 | coagulation factor V | 1q23 | + | +/- | 2  | 3 | Down | **Mayor-Lynn 2011, Winn 2009,** Nishizawa 2011 |
| HEXB | hexosaminidase B | 5q13 |   | + | 1  | 3 | Up | **Tsai 2011,** Enquobahrie 2008, Nishizawa 2007 |
| HSD17B1 | hydroxysteroid (17-beta) dehydrogenase 1 | 17q11-q21 |   | +/- | 2  | 3 | Down | **Centlow 2011, Winn 2009,** Nishizawa 2011 |
| HTRA4 | HtrA serine peptidase 4 | 8p11.22 | + | + | 1  | 3 | Up | **Sitras 2009,** Nishizawa 2011, Varkonyi 2011 |

**Table S3 (continued)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene symbol** | **Gene name** | **Chromosomal location** | **Encodes extracellular protein** | **1st trimester expression** | **Number of times present in complete signature** | **Number of times present in any signature** | **Expression in pre-eclampsia** | **References** |
| IGFBP1 | insulin-like growth factor binding protein 1 | 7p13-p12 | + | +/- | 1  | 3 | Up\* | **Gack 2005,** Ahr 2006, Pang (combined) |
| LHB | luteinizing hormone beta polypeptide | 19q13.32 | + | +/- | 2  | 3 | Up | **Sitras 2009, Winn 2009,** Varkonyi 2011 |
| PGF | placental growth factor | 14q24.3 | + | + | 2  | 3 | Up\* | **Gack 2005, Zhou 2006,** Pang (combined) |
| PHYHIP | phytanoyl-CoA 2-hydroxylase interacting protein | 8p21.3 |   | - | 3 | 3 | Up | **Reimer 2002, Sitras 2009, Winn 2009** |
| PLEC | plectin | 8q24 |   | +/- | 3 | 3 | Up | **Gack 2005, Sitras 2009, Zhou 2006** |
| PVRL4 | poliovirus receptor-related 4 | 1q22-q23.2 | + | - | 1  | 3 | Up | **Sitras 2009,** Nishizawa 2007, Nishizawa 2011 |
| RDH13 | retinol dehydrogenase 13 (all-trans/9-cis) | 19q13.42 |   | +/- | 3 | 3 | Up | **Sitras 2009, Tsai 2011, Winn 2009** |
| SASH1 | SAM and SH3 domain containing 1 | 6q24.3 |   | +/- | 3 | 3 | Up | **Hoegh 2010, Sitras 2009, Winn 2009** |
| SEMA4C | sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4C | 2q11.2 |   | +/- | 2  | 3 | Up | **Sitras 2009, Tsai 2011,** Vaiman 2005 |

**Table S3 (continued)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene symbol** | **Gene name** | **Chromosomal location** | **Encodes extracellular protein** | **1st trimester expression** | **Number of times present in complete signature** | **Number of times present in any signature** | **Expression in pre-eclampsia** | **References** |
| SPAG4 | sperm associated antigen 4 | 20q11.21 |   | - | 3 | 3 | Up | **Sitras 2009, Tsai 2011, Winn 2009** |
| SPP1 | secreted phosphoprotein 1 | 4q22.1 | + | +/- | 2  | 3 | Up | **Gack 2005, Tsoi 2003,** Pang (combined) |
| TNFSF10 | tumor necrosis factor (ligand) superfamily, member 10 | 3q26 | + | +/- | 0 | 3 | Up | Hansson 2006, Heikkila 2005, Pang (combined) |
| TREM1 | triggering receptor expressed on myeloid cells 1 | 6p21.1 | + | +/- | 1  | 3 | Up | **Sitras 2009,** Nishizawa 2011, Varkonyi 2011 |
| VEGFA | vascular endothelial growth factor A | 6p12 | + | +/- | 1  | 3 | Up\* | **Soleymanlou 2005,** Järvenpää (combined), Lee 2010 |
| VIM | vimentin | 10p13 |   | +/- | 1  | 3 | – | **Gack 2005,** Vaiman 2005, Pang (combined) |