

Supplementary Table S1 List of pre-selected genes that were used in a customized real time PCR array.

Gene name	Entrez Gene ID	Description	TaqMan Probe ID	Localization inside cell	References
<i>PIK3CA</i>	5290	Phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha	Hs00907957_m1	Cytoplasm	Wu <i>et al.</i> (2011), McConechy <i>et al.</i> (2014), Er <i>et al.</i> (2016)
<i>PTEN</i>	5728	Phosphatase and tensin-like protein	Hs02621230_s1	Cytoplasm	Kurman and Shih <i>le</i> (2011), Munksgaard and Blaakaer (2012), Govatati <i>et al.</i> (2014), McConechy <i>et al.</i> (2014)
<i>MAPK3/ERK1^a</i>	5595	Mitogen-activated protein kinase 3	Hs00946872_m1	Cytoplasm	Li <i>et al.</i> (2012), Montserrat <i>et al.</i> (2012), Young <i>et al.</i> (2014), Ping <i>et al.</i> (2016)
<i>USF2/FOS^a</i>	7392	Upstream transcription factor 2, C-Fos interacting protein	Hs00231528_m1	Nucleus	Morsch <i>et al.</i> (2009)
<i>TP53^a</i>	7157	Cellular tumour antigen P53	Hs01034249_m1	Nucleus	McConechy <i>et al.</i> (2014), Munksgaard and Blaakaer (2012)
<i>ARID1A^a</i>	8289	AT rich interactive domain 1A	Hs00195664_m1	Nucleus	Kurman and Shih <i>le</i> (2011), Munksgaard and Blaakaer (2012), Xiao <i>et al.</i> (2012), McConechy <i>et al.</i> (2014), Er <i>et al.</i> (2016), Takeda <i>et al.</i> (2016)
<i>KRAS^a</i>	3845	Kirsten rat sarcoma viral oncogene homologue	Hs00270666_m1	Cytoplasm	Kurman and Shih <i>le</i> (2011), Stewart <i>et al.</i> (2012), McConechy <i>et al.</i> (2014)
<i>BRCA1</i>	672	Breast cancer 1, early onset	Hs01556193_m1	Nucleus	Kurman and Shih <i>le</i> (2011), Aviel-Ronen <i>et al.</i> (2014)
<i>mTOR</i>	2475	Mechanistic target of rapamycin	Hs00234508_m1	Nucleus	Wu <i>et al.</i> (2011), Makker <i>et al.</i> (2012)
<i>TGF-β1^a</i>	7040	Transforming growth factor, beta 1	Hs00998133_m1	Extracellular space	Pizzo <i>et al.</i> (2002), Bierie and Moses (2006), Cheng <i>et al.</i> (2012), Young <i>et al.</i> (2014), Ping <i>et al.</i> (2016)
<i>KIT/CD117^a</i>	3815	V-Kit Hardy-Zuckerman four feline sarcoma viral oncogene homologue	Hs00174029_m1	Plasma membrane	Uzan <i>et al.</i> (2005), Kobayashi <i>et al.</i> (2008), Liu <i>et al.</i> (2010), Silveira <i>et al.</i> (2012)
<i>CD44^a</i>	960	CD44 Molecule (Indian blood group)	Hs01075861_m1	Plasma membrane	Bapat (2010), Gun <i>et al.</i> (2012), Lopez <i>et al.</i> (2013), Shi <i>et al.</i> (2013), He <i>et al.</i> (2014)
<i>LGR5</i>	8549	Leucine-rich repeat containing G protein-coupled receptor 5	Hs00173664_m1	Plasma membrane	Flesken-Nikitin <i>et al.</i> (2013), Sun <i>et al.</i> (2015)
<i>MMP3^a</i>	4314	Matrix metalloproteinase 3	Hs00968305_m1	Extracellular space	Meng <i>et al.</i> (2007), Do <i>et al.</i> (2008), Chelariu-Raicu <i>et al.</i> (2016)
<i>SNAIL^a</i>	6615	Snail family zinc finger 1	Hs00195591_m1	Nucleus	Cheng <i>et al.</i> (2012), Montserrat <i>et al.</i> (2012), Lamouille <i>et al.</i> (2014), Lee <i>et al.</i> (2014), Takai <i>et al.</i> (2014)
<i>TWIST1^a</i>	7291	Twist family BHLH transcription factor 1	Hs00361186_m1	Nucleus	Cheng <i>et al.</i> (2012), Lamouille <i>et al.</i> (2014), Takai <i>et al.</i> (2014)
<i>E-cadherin/CDH1^a</i>	999	Epithelial calcium-dependent adhesion protein	Hs01023894_m1	Plasma membrane	Montserrat <i>et al.</i> (2012), Gupta <i>et al.</i> (2013), Lamouille <i>et al.</i> (2014), Takai <i>et al.</i> (2014)
<i>N-Cadherin/CDH2^b</i>	1000	Neuronal calcium-dependent adhesion protein	Hs00983056_m1	Plasma membrane	Lamouille <i>et al.</i> (2014), Takai <i>et al.</i> (2014)
<i>BM11^a</i>	648	BM11 Polycomb ring finger oncogene	Hs00180411_m1	Nucleus	Forte <i>et al.</i> (2009), Zeng <i>et al.</i> (2014)
<i>LEF1</i>	51176	Lymphoid enhancer-binding factor 1	Hs01547250_m1	Nucleus	Flesken-Nikitin <i>et al.</i> (2013)
<i>ALDH1A1</i>	216	Aldehyde dehydrogenase 1 family, member A1	Hs00946916_m1	Cytoplasm	Ginestier <i>et al.</i> (2007), Penumatsa <i>et al.</i> (2010), Kryczek <i>et al.</i> (2012), Flesken-Nikitin <i>et al.</i> (2013), Lopez <i>et al.</i> (2013)
<i>PROM1/CD133</i>	8842	Prominin 1	Hs01009250_m1	Plasma membrane	Curley <i>et al.</i> (2009), Rutella <i>et al.</i> (2009), Bapat (2010), Kryczek <i>et al.</i> (2012), Prud'homme (2012), Flesken-Nikitin <i>et al.</i> (2013), Lopez <i>et al.</i> (2013)
<i>ABCG2/CD338</i>	9429	ATP-Binding cassette, sub-family G, member 2	Hs01053790_m1	Plasma membrane	Hu <i>et al.</i> (2010), Chen <i>et al.</i> (2014), He <i>et al.</i> (2014)

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Supplementary Table S1 *Continued*

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<i>CTNNB1</i> / β -catenin ^a	1499	Catenin (Cadherin-associated protein), beta 1	Hs00355049_m1	Nucleus	Kurman and Shih <i>et al.</i> (2011), Gadducci <i>et al.</i> (2014), McConechy <i>et al.</i> (2014)
<i>NOTCH3</i> ^a	4854	Notch (Drosophila) homologue 3	Hs01153153_m1	Plasma membrane	Davidson <i>et al.</i> (2006), Park <i>et al.</i> (2008), Gupta <i>et al.</i> (2013), Groeneweg <i>et al.</i> (2014)
<i>SMO</i>	6608	Smoothed, frizzled class receptor	Hs01090242_m1	Cytoplasm	Feng <i>et al.</i> (2007)
<i>MSI1</i> ^a	4440	Musashi RNA-binding protein 1	Hs00159291_m1	Cytoplasm	Esteller <i>et al.</i> (1999)
<i>NANOG</i> ^a	79923	Homeobox transcription factor Nanog	Hs04260366_g1	Nucleus	Forte <i>et al.</i> (2009), Cervello <i>et al.</i> (2011), Mak <i>et al.</i> (2012), Wang <i>et al.</i> (2013)
<i>POU5F1</i> /Oct3/4 ^a	5460	POU Class five homeobox 1	Hs04260367_gh	Nucleus	Cheng <i>et al.</i> (2007), Forte <i>et al.</i> (2009), Rizzino (2009), Peng <i>et al.</i> (2010), Mak <i>et al.</i> (2012)
<i>SOX2</i> ^a	6657	SRY (Sex determining region Y)-box 2	Hs01053049_s1	Nucleus	Forte <i>et al.</i> (2009), Rizzino (2009), Liang <i>et al.</i> (2012), Mak <i>et al.</i> (2012), Herreros-Villanueva <i>et al.</i> (2013), Lee <i>et al.</i> (2014)
<i>CDK2</i>	1017	Cyclin-dependent kinase 2	Hs01548894_m1	Nucleus	Wiehle <i>et al.</i> (2011)
<i>Ki67</i> ^a	4288	Antigen identified by monoclonal antibody Ki67	Hs01032443_m1	Nucleus	Mertens <i>et al.</i> (2002), Zambon (2010), Kim <i>et al.</i> (2014)
<i>PCNA</i>	5111	Proliferating cell nuclear antigen	Hs00427214_g1	Nucleus	Strzalka and Ziemienowicz (2011)
<i>BCL2</i>	596	B-Cell CLL/lymphoma 2	Hs00608023_m1	Nucleus	Mertens <i>et al.</i> (2002), Pollacco <i>et al.</i> (2012)
<i>HIF1α</i> ^a	3091	Hypoxia inducible factor 1, alpha subunit	Hs00153153_m1	Nucleus	Liang <i>et al.</i> (2012)
<i>VEGF-α</i>	7422	Vascular endothelial growth factor A	Hs00900055_m1	Extracellular space	Machado <i>et al.</i> (2010)
<i>EPAS1</i> /HIF2 α ^a	2034	Endothelial PAS domain protein 1	Hs01026149_m1	Nucleus	Raspaglio <i>et al.</i> (2014)
<i>TNFα</i>	7124	Tumour necrosis factor alpha	Hs00174128_m1	Extracellular space	Pizzo <i>et al.</i> (2002), Lee <i>et al.</i> (2008), Saliminejad <i>et al.</i> (2013)
<i>EZH2</i>	2146	Enhancer of zeste homologue 2	Hs00544833_m1	Nucleus	Takeda <i>et al.</i> (2016)
<i>ESR1</i> /ER- α ^a	2099	Oestrogen receptor alpha	Hs00174860_m1	Nucleus	Chan and Gargett (2006), Cervello <i>et al.</i> (2011), Schuring <i>et al.</i> (2011), Bossard <i>et al.</i> (2012), Zannoni <i>et al.</i> (2013), Gadducci <i>et al.</i> (2014), Heard <i>et al.</i> (2014)
<i>ESR2</i> /ER- β ^a	2100	Oestrogen receptor beta	Hs01100353_m1	Nucleus	
<i>PGR</i> /PR	5241	Progesterone receptor	Hs01556702_m1	Nucleus	Bath <i>et al.</i> (1999), Jabbour <i>et al.</i> (2006), Cervello <i>et al.</i> (2011), Meng <i>et al.</i> (2011), Schuring <i>et al.</i> (2011), Zannoni <i>et al.</i> (2013), Barragan <i>et al.</i> (2016)
<i>HOXA10</i>	3206	Homeobox A10	Hs00172012_m1	Nucleus	Ferrell <i>et al.</i> (2005), Chen <i>et al.</i> (2012)
<i>AMHRII</i>	269	anti-Mullerian hormone receptor type 2	Hs00179718_m1	Nucleus	Carrarelli <i>et al.</i> (2014)
<i>18 s</i>	19791	18 S ribosomal RNA (housekeeping gene)	4319413E	Nucleus	Kozera and Rapacz (2013)

Symbols: ^aGenes that were analysed only in the Tissue cohort.