

Table 1. Quantitative evaluation of 58 RA-responsive genes including three AS types by real-time PCR.

AS pattern	Gene symbol	cDNA name	Change in expression level compared to the 0-day sample					Expression pattern	Gene description	References
			1-day	2- days	7- days	14- days	35- days			
Alt. N-terminus	DCLK1	FLJ50539	±	Dn	Dn	Dn	Dn	Differ	doublecortin-like kinase 1	[10, 36-38]
		NM_004734.2	±	±	Up	Up	Up			
	ETV1	NM_004956.3	±	Dn	±	Up	Up	Differ	ets variant 1	[8, 10, 24-27]
		FLJ50494	±	±	Dn	Up	Up			
	ETV4	NM_001986.1	±	Dn	Dn	Dn	Dn	Differ	ets variant 4	[8, 22, 23]
		BC007242.1	±	Dn	Dn	Dn	±			
	ETV5	NM_004454.1	Dn	Dn	Dn	Dn	±	Differ	ets variant gene 5	[8, 22-25]
		FLJ56169	±	Dn	Dn	±	Up			
	GPRC5B	NM_016235.1	±	±	±	Dn	±	Differ	G protein-coupled receptor, family C, group 5, member B	[40-42]
		FLJ55176	±	Dn	±	Dn	±			
	HOXA3	NM_030661.3	Up (208)	Up (1,911)	Up (49,668)	Up (106,464)	Up (212,928)	Differ	homeobox A3	[8, 18, 19]
		NM_153632.1	±	Up	Up	Up	Up (195)			
	MEIS2	NM_020149.2	Up	Up	Up	Up	Up	Same	Meis homeobox 2	[34, 35]
		NM_002399.2	Up	Up	Up	Up	Up			
		NM_172316.1	Up	Up	Up	Up	Up			
	NEFM	FLJ58361	±	±	Up	Up	Up	Same	neurofilament, medium polypeptide	[43, 44]
		NM_005382.1	±	±	Up	Up	Up			
	PAX6	NM_000280.2	Up	Up	Up (295)	Up (195)	Up (182)	Same	paired box 6	[8, 32, 33]
		FLJ36930	Up	Up	Up (338)	Up (416)	Up (389)			
	PDZRN3	FLJ55043	Up	Up (169)	Up (3,327)	Up (512)	Up (1,177)	Differ	PDZ domain containing RING finger 3	[10, 39]
		FLJ54746	±	Up	Up	Up	Up			
		FLJ54738	±	Up	Up (128)	Up	Up			
		FLJ97766	±	Up	Up	Up	Up			
		NM_015009.1	±	Up	Up	Up	Up			
	POU5F1	NM_002701.3	±	±	Dn	Dn	Dn	Differ	POU class 5 homeobox 1	[8, 28-31]
		NM_203289.3	±	Dn	Dn	Dn	Dn			
	RARB	NM_000965.2	Up	Up (256)	Up (195)	Up (182)	Up (478)	Differ	retinoic acid receptor, beta	[8, 20, 21]
		FLJ56241	Up	Up	Up	Up	Up			
	SEMA3C	FLJ55486	±	±	Up	Up	Up	Differ	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3C	[45, 46]
		NM_006379.2	Up	Up	Up (158)	Up	Up (158)			
	SKAP2	FLJ50630	Up (549)	Up (2,703)	Up (2,195)	Up (21,619)	Up (40,343)	Differ	src kinase associated phosphoprotein 2	[10, 47]
		FLJ51950	Up (512)	Up (1,261)	Up (4,706)	Up (295)	Up (3,566)			
		NM_003930.3	Up (104)	Up (195)	Up (1,177)	Up (5,405)	Up (15,287)			
Alt. cassette-exon	TGIF1	NM_003244.2	Dn	Dn	±	Dn	Dn	Differ	TGFB-induced factor (TALE family homeobox)	[48]
		NM_173207.1	±	±	Up	±	Dn			
		NM_170695.2	Dn	±	±	Dn	Dn			
	TXNIP	NM_006472.1	±	Up	Up (148)	Up	Up	Differ	thioredoxin interacting protein	[49, 50]
		FLJ59613	±	Up	Up	Up	Up			
	ASRGL1	NM_025080.2	±	Up	Up	±	±	Same	asparaginase like 1	[57]
		BC064963.1	±	Up	Up	±	±			
	CYP2S1	NM_030622.6	Up	±	Dn	Dn	Dn	Differ	cytochrome P450, family 2, subfamily S, polypeptide 1	[58]
		FLJ52866	±	±	Dn	Dn	Dn			
	CYP26B1	NM_019885.2	±	±	Up (182)	Up	Up (725)	Same	cytochrome P450, family 26, subfamily B, polypeptide 1	[52, 53]
		FLJ51622	±	±	Up (128)	Up	Up (416)			
	DNMT3B	NM_006892.3	±	Dn	Dn (112)	Dn (2,703)	Dn (1,449)	Differ	DNA (cytosine-5-)-methyltransferase 3 beta	[54-56]
		NM_175849.1	Up	±	Dn	Dn	Dn			
	GSTO2	NM_183239.1	Dn	Dn	±	Dn	±	Differ	glutathione S-transferase omega 2	[59, 60]
		FLJ52232	Dn	Dn	Dn	Dn	Dn			
	HOXA1	NM_005522.3	Up (32,768)	Up (20,172)	Up (23,171)	Up (2,195)	Up (6,654)	Differ	homeo box A1	[61-63]
		NM_153620.1	Up (14,264)	Up (17,560)	Up (11,586)	Up (892)	Up (1,449)			
	ISYNA1	NM_016368.3	±	Up	Up	Up	Up	Differ	myo-inositol 1-phosphate synthase A1	[64, 65]
		FLJ34860	Up	Up	Up	Up	Up			
		FLJ36142	±	±	Up	±	±			
	NMU	NM_006681.1	Up	Up	Up	Up	Up	Same	neuromedin U	[66, 67]
		ENST00000381315	Up	Up	Up	Up	Up			
	PKNOX2	NM_022062.1	Up	Up	Up	Up	Up	Same	PBX/knotted 1 homeobox 2	[68, 69]
		FLJ58605	Up	Up	Up	Up	Up			
	RFX2	NM_000635.2	±	Up	Up	Up (148)	Up (338)	Same	regulatory factor X, 2 (influences HLA class II expression)	[8, 51]
		FLJ53376	±	Up	Up	Up (128)	Up (295)			
	RNF207	NM_173795.2	Up	±	Up	Up	Up	Differ	ring finger protein 207	[8, 70]
		FLJ54599	Up	Up	Up	Up	Up			
	SPP1	FLJ54682	±	±	±	Dn	Dn	Same	secreted phosphoprotein 1 (osteopontin, bone sialoprotein 1, early T-lymphocyte activation 1)	[71-73]
		FLJ52507	±	±	±	Dn	Dn			
		FLJ78337	±	±	±	Dn	Dn			
		NM_000582.2	±	±	±	Dn	Dn			

Table 1. Continue.

AS pattern	Gene symbol	cDNA name	Change in expression level compared to the 0-day sample					Expression pattern	Gene description	References
			1-day	2- days	7- days	14- days	35- days			
Alt. C-terminus	ATG9B	NM_173681.3 FLJ39415	Up ±	Up Up	± ±	± ±	± ±	Differ	ATG9 autophagy related 9 homolog B (S. cerevisiae)	[8, 87, 88]
	CDH6	NM_004932.2 BC000019.2	± ±	Dn ±	Up Up	Up Up	Up ±	Differ	cadherin 6, type 2, K-cadherin (fetal kidney)	[8, 89]
	CKMT1B	NM_020990.3 FLJ52224 FLJ52454	± ± ±	± ± ±	Dn Dn Dn	Dn ± Dn	± ± Up	Differ	creatine kinase, mitochondrial 1B	[8, 90]
	CLIP4	NM_024692.3 FLJ55798	± ±	± Up	Up Up	Up Up	Up Up	Differ	CAP-GLY domain containing linker protein family, member 4	[8]
	CTHRC1	NM_138455.2 FLJ57590	Up ±	Up Up	Up Up	Up Up	Up Up	Differ	collagen triple helix repeat containing 1	[8, 75-77]
	DENND5B	NM_144973.2 BC020855.1	± ±	± ±	Up Up	Up ±	Up Up	Differ	DENN/MADD domain containing 5B	[8]
	DMKN	NM_033317.2 FLJ57785	± ±	Dn ±	± Dn	Dn Dn	Dn Dn	Differ	dermokine	[8, 91, 92]
	EPB41L5	NM_020909.2 BC032822.2	± ±	± ±	Up ±	± ±	± ±	Differ	erythrocyte membrane protein band 4.1 like 5	[8, 78]
	EVL	NM_016337.2 FLJ58489	± ±	± ±	Up Up	Up Up	Up Up	Same	Enah/Vasp-like	[8, 93]
	FEZ1	NM_005103.3 NM_022549.2	± ±	± ±	Dn Dn	Dn Dn	± Dn	Differ	fasciculation and elongation protein zeta 1 (zygin I)	[8, 94, 95]
	FNDC5	NM_153756.1 BC062297.1	Up Up	Up Up	Up Up	Up Up	Up Up	Same	fibronectin type III domain containing 5	[8, 96]
	FST	NM_013409.1 NM_006350.2	± ±	Dn Dn	Dn Dn	Dn Dn	Dn Dn	Same	folliculin	[8, 97, 98]
	HNF1B	NM_000458.1 NM_006481.1	Up Up	Up (676) Up (725)	Up (589) Up (446)	Up (416) Up (1,783)	Up (256) Up (1,177)	Differ	HNF1 homeobox B	[8, 85, 86]
	HOXA2	NM_006735.3 FLJ39423	Up (7,132) Up (275)	Up (17,560) Up (589)	Up (161,369) Up (3,105)	Up (86,476) Up (3,822)	Up (244,590) Up (12,417)	Differ	homeobox A2	[8, 83, 84]
	ITIH5	NM_030569.3 NM_001001851.1	Up Up	Up Up	Up Up	Up Up	Up Up	Same	inter-alpha (globulin) inhibitor H5	[8, 99, 100]
	LMCD1	NM_014583.2 FLJ55005	Dn ±	Dn Dn	± ±	± ±	Dn Dn	Differ	LIM and cysteine-rich domains 1	[8, 101]
	MAPKAPK2	NM_004759.3 NM_032960.2	Up Up	Up Up	± ±	± ±	Dn ±	Differ	mitogen-activated protein kinase-activated protein kinase 2	[8 102, 103]
	MRPS15	NM_031280.2 FLJ56752	± ±	± ±	± ±	± ±	Dn ±	Differ	mitochondrial ribosomal protein S15	[8, 104]
	MS4A6A	NM_152852.1 NM_022349.2	± ±	Dn ±	Dn Dn	Up ±	Up Up	Differ	membrane-spanning 4-domains, subfamily A, member 6A	[8, 105, 106]
	MTA3	NM_020744.2 FLJ45312	± ±	± Dn	± Dn	± ±	Dn ±	Differ	metastasis associated 1 family, member 3	[8, 107, 108]
	NPHP1	NM_000272.2 NM_207181.1	± ±	± ±	Up Up	Up ±	Up ±	Differ	nephronophthisis 1 (juvenile)	[8, 109, 110]
	NRP2	NM_003872.2 NM_018534.3 NM_201264.1	Up Up ±	Up Up Up	Up Up Up	± Up Dn	Up Up Dn	Differ	neuropilin 2	[8, 13, 74]
	PEG3	NM_006210.1 NM_015363.3	± ±	± ±	Up ±	Up Up	Up Up	Differ	paternally expressed 3	[8, 79-81]
	RBP1	NM_002899.2 FLJ50903	Up Up	Up Up	Up Up	Up Up	Up Up	Same	retinol binding protein 1, cellular	[8, 111, 112]
	SLC44A5	NM_152697.2 FLJ35851	± ±	± ±	Up Up	Up Up	Up Up	Same	solute carrier family 44, member 5	[8]
	ST3GAL5	NM_003896.2 FLJ55056	± ±	± Up	Up Up	Up Up	Up Up	Differ	ST3 beta-galactoside alpha-2,3-sialyltransferase 5	[8, 113]
	TES	NM_015641.2 FLJ59160	± Dn	± ±	Up Up	Up Up	Up Up	Differ	testis derived transcript (3 LIM domains)	[8, 114]
	WDR74	NM_018093.1 FLJ57690	± ±	± ±	± ±	Dn ±	Dn ±	Differ	WD repeat domain 74	[8]
	YPEL3	NM_031477.3 FLJ12347	± ±	Up Up	Up Up	Up Up	Up Up	Same	yippee-like 3 (Drosophila)	[8, 115]
	ZNF483	NM_133464.1 FLJ35492	± ±	Dn ±	Dn Dn	Dn Dn	Dn Dn	Differ	zinc finger protein 483	[8, 82]

Symbols used to indicate differences of mean averages of log2 ratios between the control (0-day) and experimental samples (1-day, 2-days, 7-days, 14-days and 35-days)

: "±", 1/2 but <twofold; "Dn", ≥ 1/100 but ≤ 1/2; "Up", ≥ twofold but < 100-fold; "Dn ( )", ≥ 1/100; and "Up ( )", ≥ 100-fold: Numbers presented within parentheses are fold-changes.