

TaqMan® Human Nuclear Receptor Array

This array is part of a collection of TaqMan® Gene Signature Arrays that enable analysis of hundreds of TaqMan® Gene Expression Assays on a micro fluidic card with minimal effort.

Nuclear hormone receptors (NRs) are ligand-activated intracellular transcription factors that have profound effects on development, homeostasis and detoxification. Ligands that are recognized by NRs include: endogenous hormones, vitamins A and D, drugs and xenobiotic compounds. Several NRs, called orphan receptors, have no known endogenous ligands. Their low affinity for fatty acids, bile acids and/or sterols (e.g., FXR, LXR and PPAR) suggests that they function as metabolic sensors. Other NRs act as xenobiotic sensors by up-regulating the expression of cytochrome P450 enzymes that are xenobiotic metabolizers. NRs function with co-activators and co-repressors to up- or down-regulate the expression of genes and can regulate the expression of a large number of genes.

The NR family is highly conserved in vertebrates. They have a modular domain structure consisting of a DNA-binding domain and a ligand-binding domain. Other domains include a modulatory A/B domain, the hinge D domain, and a variable C-terminal F domain that is missing in some NRs. The TaqMan® Nuclear Receptor Gene Signature Array contains 48 human NRs (and 16 controls) and has been classified according to sequence homology into seven subfamilies.

Group	Genes	Gene Symbols
Subfamily 0	2	AHC (NR0B1), SHP (NR0B2)
Subfamily 1	19	NR1D1, NR1D2, NR1H2-4, NR1I2, NR1I3, PPARA, PPARD, PPARG, RARA, RARB, RARG, RORA, RO RB, RORC, THRA, THRB, VDR
Subfamily 2	12	HNF4A, HNF4G, NR2C1, NR2C2, NR2E1, NR2E3, NR2F1, NR2F2, NR2F6, RXRA, RXRB, RXRG
Subfamily 3	9	AR, ESR1, ESR2, ESRR1, ESRRB, ESRRG, NR3C1, NR3C2, PGR
Subfamily 4	3	NR4A1-3
Subfamily 5	2	NR5A1, NR5A2
Subfamily 6	1	NR6A1
Controls	16	18S, ACTB, B2M, GAPDH, GUSB, HMBS, HPRT1, IPO8, PGK1, POLR2A, PPIA, RPLP0, TBP, TFRC, UBC, YWHAZ

References:

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- Mohan, R. & Heyman, R.A. *Curr. Top. Med. Chem.* 2003, 3(14):1637-47
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Gene Signature Array Name	# of Targets/Controls	Format	Pack Size	Part Number
Human Nuclear Receptor Array	48/16	Format 64	4 arrays/pack	4379961

Human Nuclear Receptor Array

A	NR0B1	NR0B1	NR0B1	NR0B2	NR0B2	NR0B2	NR1D1	NR1D1	NR1D1	18S	18S	18S	NR1D2	NR1D2	NR1D2	NR1H2	NR1H2	NR1H2	NR1H3	NR1H3	NR1H3	NR1H4	NR1H4	NR1H4	1
B	NR1I2	NR1I2	NR1I2	NR1I3	NR1I3	NR1I3	PPARA	PPARA	PPARA	PPARD	PPARD	PPARD	PPARG	PPARG	PPARG	RARA	RARA	RARA	RARB	RARB	RARB	RARG	RARG	RARG	
C	RORA	RORA	RORA	RORB	RORB	RORB	RORC	RORC	RORC	THRA	THRA	THRA	THRB	THRB	THRB	VDR	VDR	VDR	HNFA4	HNFA4	HNFA4	HNFA4	HNFA4	HNFA4	2
D	NR2C1	NR2C1	NR2C1	NR2C2	NR2C2	NR2C2	NR2E1	NR2E1	NR2E1	NR2E3	NR2E3	NR2E3	NR2F1	NR2F1	NR2F1	NR2F2	NR2F2	NR2F2	NR2F6	NR2F6	NR2F6	NR2F6	NR2F6	NR2F6	
E	RXRB	RXRB	RXRB	RXRG	RXRG	RXRG	AR	AR	AR	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESRRA	ESRRA	ESRRA	ESRRB	ESRRB	ESRRB	ESRRB	ESRRB	ESRRB	3
F	NR3C1	NR3C1	NR3C1	NR3C2	NR3C2	NR3C2	PGR	PGR	PGR	NR4A1	NR4A1	NR4A1	NR4A2	NR4A2	NR4A2	NR4A3	NR4A3	NR4A3	NR5A1	NR5A1	NR5A1	NR5A2	NR5A2	NR5A2	
G	NR6A1	NR6A1	NR6A1	ACTB	ACTB	ACTB	B2M	B2M	B2M	GUSB	GUSB	GUSB	HMBS	HMBS	HMBS	HPRT1	HPRT1	HPRT1	IPO8	IPO8	IPO8	PGK1	PGK1	PGK1	4
H	POLR2A	POLR2A	POLR2A	PPIA	PPIA	PPIA	RPLP0	RPLP0	RPLP0	TBP	TBP	TBP	TFRC	TFRC	TFRC	UBC	UBC	UBC	YWHAZ	YWHAZ	YWHAZ	GAPDH	GAPDH	GAPDH	
I	NR0B1	NR0B1	NR0B1	NR0B2	NR0B2	NR0B2	NR1D1	NR1D1	NR1D1	18S	18S	18S	NR1D2	NR1D2	NR1D2	NR1H2	NR1H2	NR1H2	NR1H3	NR1H3	NR1H3	NR1H4	NR1H4	NR1H4	5
J	NR1I2	NR1I2	NR1I2	NR1I3	NR1I3	NR1I3	PPARA	PPARA	PPARA	PPARD	PPARD	PPARD	PPARG	PPARG	PPARG	RARA	RARA	RARA	RARB	RARB	RARB	RARG	RARG	RARG	
K	RORA	RORA	RORA	RORB	RORB	RORB	RORC	RORC	RORC	THRA	THRA	THRA	THRB	THRB	THRB	VDR	VDR	VDR	HNFA4	HNFA4	HNFA4	HNFA4	HNFA4	HNFA4	6
L	NR2C1	NR2C1	NR2C1	NR2C2	NR2C2	NR2C2	NR2E1	NR2E1	NR2E1	NR2E3	NR2E3	NR2E3	NR2F1	NR2F1	NR2F1	NR2F2	NR2F2	NR2F2	NR2F6	NR2F6	NR2F6	NR2F6	NR2F6	NR2F6	
M	RXRB	RXRB	RXRB	RXRG	RXRG	RXRG	AR	AR	AR	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESRRA	ESRRA	ESRRA	ESRRB	ESRRB	ESRRB	ESRRB	ESRRB	ESRRB	7
N	NR3C1	NR3C1	NR3C1	NR3C2	NR3C2	NR3C2	PGR	PGR	PGR	NR4A1	NR4A1	NR4A1	NR4A2	NR4A2	NR4A2	NR4A3	NR4A3	NR4A3	NR5A1	NR5A1	NR5A1	NR5A2	NR5A2	NR5A2	
O	NR6A1	NR6A1	NR6A1	ACTB	ACTB	ACTB	B2M	B2M	B2M	GUSB	GUSB	GUSB	HMBS	HMBS	HMBS	HPRT1	HPRT1	HPRT1	IPO8	IPO8	IPO8	PGK1	PGK1	PGK1	8
P	POLR2A	POLR2A	POLR2A	PPIA	PPIA	PPIA	RPLP0	RPLP0	RPLP0	TBP	TBP	TBP	TFRC	TFRC	TFRC	UBC	UBC	UBC	YWHAZ	YWHAZ	YWHAZ	GAPDH	GAPDH	GAPDH	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Port

More arrays will be available soon! Register to receive new Gene Signature Array product announcements, or suggest an array at taqmanarray.appliedbiosystems.com

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The TaqMan® Array is covered by U.S. Patents Nos. 6,514,750, 6,942,837, 7,211,443, and 7,235,406. Micro Fluidic Card developed in collaboration with 3M Company.

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