

# Oligo GEMArray<sup>®</sup> DNA Microarray:

## Human Autoimmune and Inflammatory Response

### Catalog Number

OHS-803  
EHS-803

### Format:

HybTube (Standard protocol)  
HybPlate (Higher throughput protocol)

### Description

The Oligo GEMArray<sup>®</sup> Human Autoimmune and Inflammatory Response Microarray profiles the expression of 440 genes involved in the autoimmunity and inflammation immune responses. It represents expression of inflammatory cytokines, chemokines, and their receptors. It contains genes related to cytokine metabolism and the production of cytokines. Genes involved in cytokine-cytokine receptor interactions are also included. Thoroughly researched panels of genes involved in the acute-phase response, inflammatory response, and humoral immune responses are represented as well. Through a simple side-by-side hybridization experiment you can determine differential gene expression between your samples.

### Functional Gene Groupings

#### **Cytokines:**

**Chemokines:** CCL1, CCL11, CCL13, CCL16, CCL17, CCL18, CCL19, CCL2, CCL20, CCL21, CCL22, CCL23, CCL24, CCL25, CCL26, CCL27, CCL28, CCL3, CCL3L1, CCL4, CCL4L1, CCL5, CCL7, CCL8, CKLF, CX3CL1, CXCL1, CXCL10, CXCL11, CXCL12, CXCL13, CXCL14, CXCL2, CXCL3, CXCL5, CXCL6, CXCL9, CYP26B1, IL13, IL8, PF4V1, PPBP, PXMP2, XCL1.

**Other Cytokines:** AREG, BMP1, BMP2, BMP3, BMP7, CAST, CD40LG, CER1, CKLFSF1, CKLFSF2, CLC, CSF1, CSF2, CSF3, CTF1, CXCL16, EBI3, ECGF1, EDA, EPO, ERBB2, ERBB2IP, FAM3B, FASLG, FGF10, FGF12, FIGF, FLT3LG, GDF2, GDF3, GDF5, GDF6, GDF8, GDF9, GLMN, GPI, GREM1, GREM2, GRN, IFNA1, IFNA14, IFNA2, IFNA4, IFNA8, IFNB1, IFNE1, IFNG, IFNK, IFNW1, IFNWP2, IK, IL10, IL11, IL12A, IL12B, IL15, IL16, IL17, IL17B, IL17C, IL17D, IL17E, IL17F, IL18, IL19, IL1A, IL1B, IL1F10, IL1F5, IL1F6, IL1F7, IL1F8, IL1F9, IL1RN, IL2, IL20, IL21, IL22, IL23A, IL24, IL26, IL27, IL28B, IL29, IL3, IL32, IL4, IL5, IL6, IL7, IL9, INHA, INHBA, INHBB, KITLG, LASS1, LEFTY1, LEFTY2, LIF, LTA, LTB, MDK, MIF, MUC4, NODAL, OSM, PBEF1, PDGFA, PDGFB, PRL, PTN, SCGB1A1, SCGB3A1, SCYE1, SDCBP, SECTM1, SIVA, SLCO1A2, SLURP1, SOCS2, SPP1, SPRED1, SRGAP1, THPO, TNF, TNFRSF11B, TNFSF10, TNFSF11, TNFSF13, TNFSF13B, TNFSF14, TNFSF15, TNFSF18, TNFSF4, TNFSF7, TNFSF8, TNFSF9, TRAP1, VEGF, VEGFB, YARS.

#### **Cytokine Receptors:**

**Cytokine Receptors:** CNTFR, CSF2RA, CSF2RB, CSF3R, EBI3, EPOR, F3, GFRA1, GFRA2, GHR, IFNAR1, IFNAR2, IFNGR1, IFNGR2, IL10RA, IL10RB, IL11RA, IL12B, IL12RB1, IL12RB2, IL13RA1, IL13RA2, IL15RA, IL17R, IL17RB, IL18R1, IL1R1, IL1R2, IL1RAP, IL1RAPL2, IL1RL1, IL1RL2, IL20RA, IL21R, IL22RA1, IL22RA2, IL28RA, IL2RA, IL2RB, IL2RG, IL31RA, IL3RA, IL4R, IL5RA, IL6R, IL6ST, IL7R, IL8RA, IL8RB, IL9R, LEPR, LIFR, MPL, OSMR, PRLR, TTN.

**Chemokine Receptors:** BLR1, CCL13, CCR1, CCR10, CCR2, CCR3, CCR4, CCR5, CCR6, CCR7, CCR8, CCR9, CCRL1, CCRL2, CX3CR1, CXCR3, CXCR4, CXCR6, IL8RA, IL8RB, XCR1.

**Cytokine Metabolism:** APOA2, ASB1, AZU1, B7H3, CD28, CD4, CD80, CD86, EBI3, GLMN, IL10, IL12B, IL17F, IL18, IL21, IL27, IL4, INHA, INHBA, INHBB, IRF4, NALP12, PRG3, S100B, SFTPD, SIGIRR, SPN, TLR1, TLR3, TLR4, TLR6, TNFRSF7, TNFSF15.

**Cytokine Production:** APOA2, ASB1, AZU1, B7H3, CD28, CD4, CD80, CD86, EBI3, GLMN, IL10, IL12B, IL17F, IL18, IL21, IL27, IL4, INHA, INHBA, INHBB, INS, IRF4, NALP12, NFAM1, NOX5, PRG3, S100B, SAA2, SFTPD, SIGIRR, SPN, TLR1, TLR3, TLR4, TLR6, TNFRSF7.

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**Other Genes involved in Cytokine-Cytokine Receptor Interaction:** ACVR1, ACVR1B, ACVR2, ACVR2B, AMH, AMHR2, BMPR1A, BMPR1B, BMPR2, CCR1, CD40, CRLF2, CSF1R, CXCR3, IL18RAP, IL23R, LEP, TGFB1, TGFB2, TGFB3, TGFB3, TGFB3, TGFB3, TNFRSF1A, TNFRSF1B, TNFRSF21, TNFRSF8, TNFRSF9, XCR1.

**Acute-Phase Response:** AHSG, APCS, APOL2, CEBPB, CRP, F2, F8, FN1, IL22, IL6, INS, ITIH4, LBP, PAP, REG-III, SAA2, SAA3P, SAA4, SERPINA1, SERPINA3, SERPINF2, SIGIRR, STAT3.

**Inflammatory Response:** ADORA1, AHSG, AIF1, ALOX5, ANXA1, APOA2, APOL3, ATRN, AZU1, BCL6, BDKRB1, BLNK, C3, C3AR1, C4A, CCL1, CCL11, CCL13, CCL16, CCL17, CCL18, CCL19, CCL2, CCL20, CCL21, CCL22, CCL23, CCL24, CCL25, CCL26, CCL3, CCL3L1, CCL4, CCL4L1, CCL5, CCL7, CCL8, CCR1, CCR2, CCR3, CCR4, CCR7, CD14, CD40, CD40LG, CD74, CD97, CEBPB, CHST1, CIAS1, CKLF, CRP, CX3CL1, CXCL1, CXCL10, CXCL11, CXCL12, CXCL13, CXCL14, CXCL16, CXCL2, CXCL3, CXCL5, CXCL6, CXCL9, CYBB, DOCK2, EPHX2, F11R, FOS, FPR1, GPR68, HDAC4, HDAC5, HDAC7A, HDAC9, HRH1, ICEBERG, IFNA2, IL10, IL10RB, IL13, IL17, IL17B, IL17C, IL17D, IL17E, IL17F, IL18RAP, IL1A, IL1B, IL1F10, IL1F5, IL1F6, IL1R1, IL1RAP, IL1RN, IL20, IL22, IL31RA, IL5, IL8, IL8RA, IL8RB, IL9, IRAK2, IRF7, ITCH, ITGAL, ITGB2, KNG1, LTA4H, LTB4R, LY64, LY75, LY86, LY96, MEFV, MGLL, MIF, MMP25, MYD88, NALP12, NCR3, NFAM1, NFATC3, NFATC4, NFE2L1, NFKB1, NFRKB, NFX1, NMI, NOS2A, NR3C1, OLR1, PAP, PARP4, PLA2G2D, PLA2G7, PRDX5, PREX1, PRG2, PRG3, PROCR, PROK2, PTAFR, PTGS2, PTPRA, PTX3, REG-III, RIPK2, S100A12, S100A8, SAA2, SCUBE1, SCYE1, SELE, SERPINA3, SFTPD, SN, SPACA3, SPP1, STAB1, SYK, TACR1, TIRAP, TLR1, TLR10, TLR2, TLR3, TLR4, TLR5, TLR6, TLR7, TLR8, TLR9, TNF, TNFAIP6, TOLLIP, TPST1, VPS45A, XCR1.

**Humoral Immune Response:** BATF, BCL2, BF, BLNK, C1R, C2, C3, C4A, CCL16, CCL18, CCL2, CCL20, CCL22, CCL3, CCL7, CCR2, CCR6, CCR7, CCRL2, CCRL2, CD1B, CD1C, CD22, CD28, CD40, CD53, CD58, CD74, CD86, CLC, CR1, CRLF1, CSF1R, CSF2RB, CXCR3, CYBB, EB13, FADD, GPI, IL10, IL12A, IL12B, IL12RB1, IL13, IL18, IL1B, IL2, IL26, IL4, IL6, IL7, IL7R, IRF4, ITGB2, LTF, LY86, LY9, LY96, MAPK11, MAPK14, MCP, NFKB1, NR4A2, PAX5, POU2AF1, POU2F2, PTAFR, RFXANK, S100B, SERPING1, SFTPD, SLA2, TNFRSF7, XCL1, XCR1, YY1.

## Storage Conditions

**Please check the kit components immediately after you receive this package. SuperArray is only responsible for missing items reported within two (2) business days of receipt.**

GEArray microarrays are shipped at ambient temperature enclosed in either a HybTube or ExpressPak Storage Box. They should be stored at  $-20^{\circ}\text{C}$  upon receipt.

## References

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3. Christopherson K, Hromas R (2001). Chemokine Regulation of Normal and Pathologic Immune Responses. *Stem Cells*. 19: 388-96.
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10. Wong, C.K., et al. (2001) Proinflammatory cytokines (IL-17, IL-6, IL-18 and IL-12) and Th cytokines (IFN-gamma, IL-4, IL-10 and IL-13) in patients with allergic asthma. *Clin Exp Immunol*. 125(2), 177-83.
11. Miyazono K. (2000) Positive and negative regulation of TGF-beta signaling, *J Cell Sci Apr*; 113 (Pt 7): 1101-9.
12. Callard R, Gearing A (1998). *The Cytokine Facts Book*, Academic Press.
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14. Bauerle, P.A. and Baichwal, V.R. (1997) NFkB As A Frequent Target For Immunosuppressive And Anti-Inflammatory Molecules. *Adv. Immunol*. 65: 111-137.
15. Rao, A. NF-Atp (1994) A transcription factor required for the co-ordinate induction of several cytokine genes. *Immuno Today* 15: 274-281.

## Product Specification Sheet

# Oligo GEArray<sup>®</sup> Human Autoimmune and Inflammatory Response Microarray

### Array Layout:

RPS27A 1	RPS27A 2	ACVR1 3	ACVR1B 4	ACVR2A 5	ACVR2B 6	ADORA1 7	AHSG 8	AIF1 9	ALOX5 10	AMH 11	AMHR2 12	ANXA1 13	GAPDH 14	GAPDH 15	GAPDH 16
RPS27A 17	APCS 18	APOA2 19	APOL2 20	APOL3 21	AREG 22	ASB1 23	ATRN 24	AZU1 25	BATF 26	BCL2 27	BCL6 28	BDKRB1 29	BF 30	BLNK 31	Blank 32
BLR1 33	BMP1 34	BMP2 35	BMP3 36	BMP7 37	BMPR1A 38	BMPR1B 39	BMPR2 40	C1R 41	C2 42	C3 43	C3AR1 44	C4A 45	CAST 46	CCL1 47	CCL11 48
CCL13 49	CCL16 50	CCL17 51	CCL18 52	CCL19 53	CCL2 54	CCL20 55	CCL21 56	CCL22 57	CCL23 58	CCL24 59	CCL25 60	CCL26 61	CCL27 62	CCL28 63	CCL3 64
CCL3L1 65	CCL4 66	CCL4L1 67	CCL5 68	CCL7 69	CCL8 70	CCR1 71	CCR10 72	CCR2 73	CCR3 74	CCR4 75	CCR5 76	CCR6 77	CCR7 78	CCR8 79	CCR9 80
CCRL1 81	CCRL2 82	CD14 83	CD180 84	CD1B 85	CD1C 86	CD22 87	CD276 88	CD28 89	CD4 90	CD40 91	CD40LG 92	CD53 93	CD58 94	CD74 95	CD80 96
CD86 97	CD97 98	CEBPB 99	CER1 100	CHST1 101	CIAS1 102	CKLF 103	CLC 104	CMTM1 105	CMTM2 106	CNTFR 107	CR1 108	CRLF1 109	CRLF2 110	CRP 111	CSF1 112
CSF1R 113	CSF2 114	CSF2RA 115	CSF2RB 116	CSF3 117	CSF3R 118	CTF1 119	CX3CL1 120	CX3CR1 121	CXCL1 122	CXCL10 123	CXCL11 124	CXCL12 125	CXCL13 126	CXCL14 127	CXCL16 128
CXCL2 129	CXCL3 130	CXCL5 131	CXCL6 132	CXCL7 133	CXCR3 134	CXCR4 135	CXCR6 136	CYBB 137	CYP26B1 138	DOCK2 139	EBI3 140	ECGF1 141	EDA 142	EPHX2 143	EPO 144
EPOR 145	ERBB2 146	ERBB2IP 147	F11R 148	F2 149	F3 150	F8 151	FADD 152	FAM3B 153	FASLG 154	FGF10 155	FGF12 156	FIGF 157	FLT3LG 158	FN1 159	AS1 160
FOS 161	FPR1 162	GDF2 163	B2M 164	GDF3 165	GDF5 166	GDF6 167	GDF8 168	GDF9 169	GFRA1 170	GFRA2 171	GHR 172	GLMN 173	GPI 174	GPR68 175	AS1 176
GREM1 177	GREM2 178	GRN 179	HDAC4 180	B2M 181	HDAC5 182	HDAC7A 183	HDAC9 184	HRH1 185	ICEBERG 186	IFNA1 187	IFNA14 188	IFNA2 189	IFNA4 190	IFNA8 191	AS1R1 192
IFNAR1 193	IFNAR2 194	IFNB1 195	IFNE1 196	IFNG 197	B2M 198	IFNGR1 199	IFNGR2 200	IFNK 201	IFNW1 202	IFNWP2 203	IK 204	IL10 205	IL10RA 206	IL10RB 207	AS1R2 208
IL11 209	IL11RA 210	IL12A 211	IL12B 212	IL12RB1 213	IL12RB2 214	IL13 215	IL13RA1 216	IL13RA2 217	IL15 218	IL15RA 219	IL16 220	IL17 221	IL17B 222	IL17C 223	AS1R3 224
IL17D 225	IL17E 226	IL17F 227	IL17R 228	IL17RB 229	IL18 230	IL18R1 231	IL18RAP 232	IL19 233	IL1A 234	IL1B 235	IL1F10 236	IL1F5 237	IL1F6 238	IL1F7 239	IL1F8 240
IL1F9 241	IL1R1 242	IL1R2 243	IL1RAP 244	IL1RAPL2 245	IL1RL1 246	IL1RL2 247	IL1RN 248	IL2 249	IL20 250	IL20RA 251	IL21 252	IL21R 253	IL22 254	IL22RA1 255	IL22RA2 256
IL23A 257	IL23R 258	IL24 259	IL26 260	IL27 261	IL28B 262	IL28RA 263	IL29 264	IL2RA 265	IL2RB 266	IL2RG 267	IL3 268	IL31RA 269	IL32 270	IL3RA 271	IL4 272
IL4R 273	IL5 274	IL5RA 275	IL6 276	IL6R 277	IL6ST 278	IL7 279	IL7R 280	IL8 281	IL8RA 282	IL8RB 283	IL9 284	IL9R 285	INHA 286	INHBA 287	INHBB 288
INS 289	IRAK2 290	IRF4 291	IRF7 292	ITCH 293	ITGAL 294	ITGB2 295	ITIH4 296	KITLG 297	KNG1 298	LASS1 299	LBP 300	LEFTY1 301	LEFTY2 302	LEP 303	LEPR 304
LIF 305	LIFR 306	LTA 307	LTA4H 308	LTB 309	LTB4R 310	LTF 311	LY75 312	LY86 313	LY9 314	LY96 315	MAPK11 316	MAPK14 317	MCP 318	MDK 319	MEFV 320
MGLL 321	MIF 322	MMP25 323	MPL 324	MUC4 325	MYD88 326	NALP12 327	NCR3 328	NFAM1 329	NFATC3 330	NFATC4 331	NFE2L1 332	NFKB1 333	NFRKB 334	NFX1 335	NMI 336
NODAL 337	NOS2A 338	NOX5 339	NR3C1 340	NR4A2 341	OLR1 342	OSM 343	OSMR 344	PARP4 345	PAX5 346	PBEF1 347	PDGFA 348	PDGFB 349	PF4V1 350	PLA2G2D 351	PLA2G7 352
POU2AF1 353	POU2F2 354	PPBP 355	PRDX5 356	PREX1 357	PRG2 358	PRG3 359	PRL 360	PRLR 361	PROCR 362	HSPCB 363	PROK2 364	PTAFR 365	PTGS2 366	PTN 367	PTPRA 368
PTX3 369	PXMP2 370	REG3A 371	REG3G 372	RFXANK 373	RIPK2 374	S100A12 375	S100A8 376	S100B 377	HSPCB 378	SAA2 379	SAA3P 380	SAA4 381	SCGB1A1 382	SCGB3A1 383	SCUBE1 384
SCYE1 385	SDCBP 386	SECTM1 387	SELE 388	SERPINA 389	SERPINA 390	SERPINF 391	SERPINF 392	HSPCB 393	SFTPD 394	SIGIRR 395	SIGLEC1 396	SIVA 397	SLA2 398	SLCO1A2 399	SLURP1 400
SOCS2 401	SPACA3 402	SPN 403	SPP1 404	SPRED1 405	SRGAP1 406	STAB1 407	HSPCB 408	STAT3 409	SYK 410	TACR1 411	TGFB1 412	TGFB2 413	TGFB3 414	TGFBR1 415	TGFBR2 416
THPO 417	TIRAP 418	TLR1 419	TLR10 420	TLR2 421	TLR3 422	TLR4 423	TLR5 424	TLR6 425	TLR7 426	TLR8 427	TLR9 428	TNF 429	TNFAIP6 430	TNFRSF11 431	TNFRSF1 432
ACTB 433	TNFRSF1 434	TNFRSF2 435	TNFRSF7 436	TNFRSF8 437	TNFRSF9 438	TNFRSF10 439	TNFRSF11 440	TNFRSF13 441	TNFRSF13 442	TNFRSF14 443	TNFRSF15 444	PUC18 445	Pol1 446	Blank 447	Blank 448
ACTB 449	Blank 450	Blank 451	TNFSF18 452	TNFSF4 453	TNFSF7 454	TNFSF8 455	TNFSF9 456	TOLLIP 457	TPST1 458	TRAP1 459	18SrRNA 460	PIIH 461	M6PR 462	NONO 463	LDHA 464
ACTB 465	ACTB 466	TTN 467	VEGF 468	VEGFB 469	VPS45A 470	XCL1 471	XCR1 472	YARS 473	YY1 474	ZFP91 475	BAS2C 476	BAS2C 477	BAS2C 478	BAS2C 479	BAS2C 480

## Product Specification Sheet

# Oligo GEArray<sup>®</sup> Human Autoimmune and Inflammatory Response Microarray

### Gene Table:

Position	UniGene	GenBank	Symbol	Description
1	Hs.546292	NM_002954	RPS27A	Ribosomal protein S27a
2	Hs.546292	NM_002954	RPS27A	Ribosomal protein S27a
3	Hs.470316	NM_011105	ACVR1	Activin A receptor, type I
4	Hs.438918	NM_004302	ACVR1B	Activin A receptor, type IB
5	Hs.470171	NM_001616	ACVR2A	Activin A receptor, type IIA
6	Hs.517775	NM_011106	ACVR2B	Activin A receptor, type IIB
7	Hs.77867	NM_000674	ADORA1	Adenosine A1 receptor
8	Hs.324746	NM_001622	AHSG	Alpha-2-HS-glycoprotein
9	Hs.76364	NM_001623	AIE1	Allonraft inflammatory factor 1
10	Hs.89499	NM_000898	ALOX5	Arachidonate 5-lipoxygenase
11	Hs.112432	NM_000479	AMH	Anti-Mullerian hormone
12	Hs.437877	NM_020547	AMHR2	Anti-Mullerian hormone receptor, type II
13	Hs.494173	NM_000700	ANXA1	Annexin A1
14	Hs.544577	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
15	Hs.544577	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
16	Hs.544577	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
17	Hs.546292	NM_002954	RPS27A	Ribosomal protein S27a
18	Hs.507080	NM_001639	APCS	Amnionin P component, serum
19	Hs.237658	NM_001643	APOA2	Apolipoprotein A-II
20	Hs.474740	NM_030882	APOI.2	Apolipoprotein I.2
21	Hs.474737	NM_014349	APOI.3	Apolipoprotein I.3
22	Hs.270833	NM_001657	AREG	Amphiregulin (schwannoma-derived growth factor)
23	Hs.516788	NM_016114	ASB1	Ankrrin repeat and SOCS box-containing 1
24	Hs.276252	NM_012070	ATRIN	Attractin
25	Hs.72885	NM_001700	AZU1	Azurocidin 1 (cationic antimicrobial protein 37)
26	Hs.503964	NM_006399	BATF	Basic leucine zipper transcription factor, ATF-like
27	Hs.150749	NM_000633	BCL2	B-cell CLL1 lymphoma 2
28	Hs.476588	NM_001706	BCL6	B-cell CLL1 lymphoma 6 (zinc finger protein 51)
29	Hs.553486	NM_000710	BDKRB1	Bradycinin receptor B1
30	Hs.69771	NM_001710	BF	B-factor, interferon
31	Hs.444049	NM_013314	BLNK	B-cell linker
32	Blank	Blank	Blank	Blank
33	Hs.113916	NM_001716	BLR1	Burkitt lymphoma receptor 1, GTP binding protein (chemokine (C-X-C motif) receptor 5)
34	Hs.1274	NM_006129	BMP1	Bone morphogenetic protein 1
35	Hs.73853	NM_001200	BMP2	Bone morphogenetic protein 2
36	Hs.121507	NM_001201	BMP3	Bone morphogenetic protein 3 (osteogenic)
37	Hs.473163	NM_001719	BMP7	Bone morphogenetic protein 7 (osteogenic protein 1)
38	Hs.524477	NM_004329	BMPRI.A	Bone morphogenetic protein receptor, type IA
39	Hs.480321	NM_001203	BMPRI.B	Bone morphogenetic protein receptor, type IB
40	Hs.471119	NM_001204	BMPRI.2	Bone morphogenetic protein receptor, type II (serine/threonine kinase)
41	Hs.524224	NM_001733	C1R	Complement component 1, r subcomponent
42	Hs.408903	NM_000063	C2	Complement component 2
43	Hs.529053	NM_000064	C3	Complement component 3
44	Hs.567242	NM_004054	C3AR1	Complement component 3a receptor 1
45	Hs.534847	NM_000592	C4A	Complement component 4A (Rodgers blood group)
46	Hs.440961	NM_173062	CAST	Calpastatin
47	Hs.72918	NM_002981	CCL1	Chemokine (C-C motif) ligand 1
48	Hs.54460	NM_002986	CCL11	Chemokine (C-C motif) ligand 11
49	Hs.414629	NM_005408	CCL13	Chemokine (C-C motif) ligand 13
50	Hs.10458	NM_004590	CCL16	Chemokine (C-C motif) ligand 16
51	Hs.546294	NM_002987	CCL17	Chemokine (C-C motif) ligand 17
52	Hs.145981	NM_002989	CCL18	Chemokine (C-C motif) ligand 18 (pulmonary and activation-regulated)
53	Hs.50002	NM_006274	CCL19	Chemokine (C-C motif) ligand 19
54	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
55	Hs.75498	NM_004591	CCL20	Chemokine (C-C motif) ligand 20
56	Hs.57907	NM_002989	CCL21	Chemokine (C-C motif) ligand 21
57	Hs.534347	NM_002990	CCL22	Chemokine (C-C motif) ligand 22
58	Hs.169191	NM_005064	CCL23	Chemokine (C-C motif) ligand 23
59	Hs.247838	NM_002991	CCL24	Chemokine (C-C motif) ligand 24
60	Hs.310511	NM_005624	CCL25	Chemokine (C-C motif) ligand 25
61	Hs.131342	NM_006072	CCL26	Chemokine (C-C motif) ligand 26
62	Hs.459590	NM_006664	CCL27	Chemokine (C-C motif) ligand 27
63	Hs.334633	NM_019846	CCL28	Chemokine (C-C motif) ligand 28
64	Hs.514107	NM_002983	CCL3	Chemokine (C-C motif) ligand 3
65	Hs.512683	NM_021006	CCL3L1	Chemokine (C-C motif) ligand 3-like 1
66	Hs.75703	NM_002984	CCL4	Chemokine (C-C motif) ligand 4
67	Hs.512306	NM_207007	CCL4L1	Chemokine (C-C motif) ligand 4-like 1
68	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
69	Hs.251526	NM_006273	CCL7	Chemokine (C-C motif) ligand 7
70	Hs.271387	NM_005623	CCL8	Chemokine (C-C motif) ligand 8
71	Hs.301921	NM_001295	CCR1	Chemokine (C-C motif) receptor 1
72	Hs.278446	NM_016602	CCR10	Chemokine (C-C motif) receptor 10
73	Hs.511794	NM_000848	CCR2	Chemokine (C-C motif) receptor 2
74	Hs.506190	NM_001837	CCR3	Chemokine (C-C motif) receptor 3
75	Hs.184926	NM_005508	CCR4	Chemokine (C-C motif) receptor 4
76	Hs.450892	NM_000579	CCR5	Chemokine (C-C motif) receptor 5
77	Hs.46469	NM_004967	CCR6	Chemokine (C-C motif) receptor 6
78	Hs.370036	NM_001838	CCR7	Chemokine (C-C motif) receptor 7
79	Hs.113222	NM_005201	CCR8	Chemokine (C-C motif) receptor 8
80	Hs.225946	NM_006641	CCR9	Chemokine (C-C motif) receptor 9
81	Hs.310512	NM_016557	CCR1L	Chemokine (C-C motif) receptor-like 1
82	Hs.458436	NM_003965	CCR2L	Chemokine (C-C motif) receptor-like 2
83	Hs.163867	NM_000591	CD14	CD14 antigen
84	Hs.87205	NM_005582	CD180	CD180 antigen
85	Hs.1310	NM_001764	CD1B	CD1b antigen
86	Hs.1311	NM_001765	CD1C	CD1c antigen, c polypeptide
87	Hs.262150	NM_001771	CD22	CD22 antigen
88	Hs.77873	NM_025240	CD276	CD276 antigen
89	Hs.1987	NM_006139	CD28	CD28 antigen (Tn94)
90	Hs.17483	NM_000616	CD4	CD4 antigen (p55)
91	Hs.472860	NM_001250	CD40	CD40 antigen (TNF receptor superfamily member 5)
92	Hs.652	NM_000074	CD40LG	CD40 ligand (TNF superfamily member 5, hvsnc-10M syndrome)
93	Hs.443057	NM_000560	CD53	CD53 antigen
94	Hs.34341	NM_001779	CD58	CD58 antigen, (lymphocyte function-associated antigen 3)
95	Hs.436568	NM_004355	CD74	CD74 antigen (invariant polypeptide of major histocompatibility complex class II antigen-associated)

# Product Specification Sheet

Position	UniGene	GenBank	Symbol	Description
96	Hs.838	NM_005191	CD80	CD80, antigen (CD28 antigen ligand 1, B7-1, antigen)
97	Hs.171182	NM_006889	CD86	CD86, antigen (CD28 antigen ligand 2, B7-2, antigen)
98	Hs.466039	NM_001784	CD97	CD97, antigen
99	Hs.517106	NM_005194	CEBPR	CCAAT/enhancer binding protein (C/EBP), beta
100	Hs.248204	NM_005454	CER1	Cerberus 1, cysteine knot superfamily, homolog (Xenopus laevis)
101	Hs.104576	NM_003654	CHST1	Carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
102	Hs.159483	NM_183395	CIAS1	Cold autoimmune syndrome 1
103	Hs.15159	NM_181641	CKLF	Chemokine-like factor
104	Hs.889	NM_001828	CLC	Charcot-Leyden crystal protein
105	Hs.549232	NM_181269	CMTM1	CKLF-like MARVEL transmembrane domain containing 1
106	Hs.195685	NM_144673	CMTM2	CKLF-like MARVEL transmembrane domain containing 2
107	Hs.129966	NM_001842	CNTFR	Ciliary neurotrophic factor receptor
108	Hs.334019	NM_000573	CR1	Complement component (3b/4b) receptor 1 (Knops blood group)
109	Hs.114948	NM_004750	CRLF1	Cytokine receptor-like factor 1
110	Hs.287729	NM_001012288	CRLF2	Cytokine receptor-like factor 2
111	Hs.76452	NM_000567	CRP	C-reactive protein, pentraxin-related
112	Hs.173894	NM_000757	CSE1	Colony stimulating factor 1 (macrophage)
113	Hs.553489	NM_005211	CSE1R	Colony stimulating factor 1 receptor, formerly McDonough feline sarcoma viral (v-fms) oncogene homolog
114	Hs.1349	NM_000758	CSE2	Colony stimulating factor 2 (granulocyte-macrophage)
115	Hs.520937	NM_006140	CSE2RA	Colony stimulating factor 2 receptor, alpha, low-affinity (granulocyte-macrophage)
116	Hs.285401	NM_000395	CSE2RB	Colony stimulating factor 2 receptor, beta, low-affinity (granulocyte-macrophage)
117	Hs.2233	NM_000759	CSE3	Colony stimulating factor 3 (granulocyte)
118	Hs.524517	NM_000760	CSE3R	Colony stimulating factor 3 receptor (granulocyte)
119	Hs.483811	NM_001330	CITE1	Cardiotrofin 1
120	Hs.531668	NM_002996	CX3CL1	Chemokine (C-X3-C motif) ligand 1
121	Hs.78913	NM_001337	CX3CR1	Chemokine (C-X3-C motif) receptor 1
122	Hs.789	NM_001511	CXCL1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
123	Hs.413924	NM_001565	CXCL10	Chemokine (C-X-C motif) ligand 10
124	Hs.518814	NM_005409	CXCL11	Chemokine (C-X-C motif) ligand 11
125	Hs.522891	NM_000609	CXCL12	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)
126	Hs.100431	NM_006419	CXCL13	Chemokine (C-X-C motif) ligand 13 (B-cell chemoattractant)
127	Hs.483444	NM_004887	CXCL14	Chemokine (C-X-C motif) ligand 14
128	Hs.82407	NM_022059	CXCL16	Chemokine (C-X-C motif) ligand 16
129	Hs.75765	NM_002089	CXCL2	Chemokine (C-X-C motif) ligand 2
130	Hs.89690	NM_002090	CXCL3	Chemokine (C-X-C motif) ligand 3
131	Hs.89714	NM_002994	CXCL5	Chemokine (C-X-C motif) ligand 5
132	Hs.164021	NM_002993	CXCL6	Chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)
133	Hs.77367	NM_002416	CXCL9	Chemokine (C-X-C motif) ligand 9
134	Hs.198252	NM_001504	CXCR3	Chemokine (C-X-C motif) receptor 3
135	Hs.421986	NM_003467	CXCR4	Chemokine (C-X-C motif) receptor 4
136	Hs.34526	NM_006564	CXCR6	Chemokine (C-X-C motif) receptor 6
137	Hs.292356	NM_000397	CYBB	Cytochrome b-245, beta polypeptide (chronic granulomatous disease)
138	Hs.91546	NM_019885	CYP26B1	Cytochrome P450, family 26, subfamily B, polypeptide 1
139	Hs.325528	NM_004946	DQCK2	Dedicator of cytokinesis 2
140	Hs.501452	NM_005755	EBI3	Einstein-Barr virus induced gene 3
141	Hs.546251	NM_001953	EGF1	Endothelial cell growth factor 1 (platelet-derived)
142	Hs.105407	NM_001998	EDA	Elastinolytic A
143	Hs.212088	NM_001379	EHX2	Enoxide hydrolase 2, cytoplasmic
144	Hs.2303	NM_000799	EPO	Erythropoietin
145	Hs.127826	NM_000121	EROR	Erythropoietin receptor
146	Hs.446352	NM_004448	ERBB2	V-erb-b2 and erbB-like leukemia viral oncogene homolog 2, neuroblastoma derived oncogene homolog (avian)
147	Hs.519346	NM_018695	ERBB2IP	ErbB2 interacting protein
148	Hs.517293	NM_144503	F11R	F11 receptor
149	Hs.76530	NM_000506	F2	Coagulation factor II (thrombin)
150	Hs.62192	NM_001993	F3	Coagulation factor III (thromboplastin, tissue factor)
151	Hs.413083	NM_000132	F8	Coagulation factor VIII, procoagulant component (hemophilia A)
152	Hs.86131	NM_003824	FADD	Fas (TNFRSF6)-associated via death domain
153	Hs.473877	NM_058186	FAM3B	Family with sequence similarity 3, member B
154	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
155	Hs.248049	NM_004465	FGF10	Fibroblast growth factor 10
156	Hs.186577	NM_021032	FGF12	Fibroblast growth factor 12
157	Hs.11392	NM_004469	FIGF	C-fos induced growth factor (vascular endothelial growth factor D)
158	Hs.428	NM_001459	FL T3L G	Fms-related tyrosine kinase 3, ligand
159	Hs.203717	NM_002026	FN1	Fibronectin 1
160	N/A	N/A	AS1	Artificial Sequence 1
161	Hs.25647	NM_005252	FOS	V-fos, FBJ murine osteosarcoma viral oncogene homolog
162	Hs.753	NM_002029	EPR1	Formyl peptide receptor 1
163	Hs.279463	NM_016204	GDF2	Growth differentiation factor 2
164	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
165	Hs.86232	NM_020634	GDF3	Growth differentiation factor 3
166	Hs.1573	NM_000557	GDF5	Growth differentiation factor 5 (cartilage-derived morphogenetic protein-1)
167	Hs.492277	NM_002390	GDF6	Growth differentiation factor 6
168	Hs.415665	NM_005258	GDF8	Growth differentiation factor 8
169	Hs.25022	NM_005260	GDF9	Growth differentiation factor 9
170	Hs.388347	NM_005264	GERA1	GDNF family receptor alpha 1
171	Hs.441202	NM_001495	GERA2	GDNF family receptor alpha 2
172	Hs.125180	NM_000163	GHR	Growth hormone receptor
173	Hs.49105	NM_007070	GLMN	Glomulin, FKBP associated protein
174	Hs.466471	NM_000175	GPI	Glucose phosphatase isomerase
175	Hs.525534	NM_003485	GPR68	G protein-coupled receptor 68
176	N/A	N/A	AS1	Artificial Sequence 1
177	Hs.40098	NM_013372	GREM1	Gremlin 1, cysteine knot superfamily, homolog (Xenopus laevis)
178	Hs.98206	NM_022469	GREM2	Gremlin 2, cysteine knot superfamily, homolog (Xenopus laevis)
179	Hs.514220	NM_002087	GRN	Granulin
180	Hs.20516	NM_006037	HDAC4	Histone deacetylase 4
181	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
182	Hs.438782	NM_005474	HDAC5	Histone deacetylase 5
183	Hs.200063	NM_016596	HDAC7A	Histone deacetylase 7A
184	Hs.196054	NM_178425	HDAC9	Histone deacetylase 9
185	Hs.1570	NM_000861	HRH1	Histamine receptor H1
186	Hs.56279	NM_021571	ICEBERG	ICEBERG caspase-1 inhibitor
187	Hs.37026	NM_024013	IFNA1	Interferon, alpha 1
188	Hs.93907	NM_002172	IFNA14	Interferon, alpha 14
189	Hs.211575	NM_000605	IFNA2	Interferon, alpha 2
190	Hs.1510	NM_021068	IFNA4	Interferon, alpha 4
191	Hs.73890	NM_002170	IFNA8	Interferon, alpha 8
192	N/A	N/A	AS1R1	Artificial Sequence 1 Related 1 (90% identity)/(56/60)
193	Hs.529400	NM_000629	IFNAR1	Interferon (alpha, beta and omega) receptor 1
194	Hs.549042	NM_000874	IFNAR2	Interferon (alpha, beta and omega) receptor 2
195	Hs.93177	NM_002176	IFNB1	Interferon, beta 1, fibroblast
196	Hs.441972	NM_176891	IFNE1	Interferon epsilon 1
197	Hs.856	NM_000619	IFNG	Interferon, gamma
198	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
199	Hs.520414	NM_000416	IFNGR1	Interferon gamma receptor 1
200	Hs.517240	NM_005534	IFNGR2	Interferon gamma receptor 2 (interferon gamma transducer 1)

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Position	UniGene	GenBank	Symbol	Description
201	Hs.551550	NM_020124	IENK	Interferon_kappa
202	Hs.73010	NM_002177	IENW1	Interferon_omega 1
203	Hs.458096	XM_378052	IENWP2	Interferon_omega 2 (pseudogene)
204	Hs.421245	NM_006083	IK	IK cytokine_down-regulator of HL A II
205	Hs.193717	NM_000572	IL10	Interleukin 10
206	Hs.504035	NM_001558	IL10RA	Interleukin 10 receptor_alpha
207	Hs.418291	NM_000628	IL10RB	Interleukin 10 receptor_beta
208	N/A	N/A	AS1R2	Artificial Sequence 1 Related 2 (80% identity)(48/60)
209	Hs.467304	NM_000641	IL11	Interleukin 11
210	Hs.204891	NM_004512	IL11RA	Interleukin 11 receptor_alpha
211	Hs.673	NM_000882	IL12A	Interleukin 12A (natural killer cell stimulatory factor 1_cytotoxic lymphocyte maturation factor 1_p35)
212	Hs.674	NM_002187	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2_cytotoxic lymphocyte maturation factor 2_p40)
213	Hs.567294	NM_005535	IL12RB1	Interleukin 12 receptor_beta 1
214	Hs.479347	NM_001559	IL12RB2	Interleukin 12 receptor_beta 2
215	Hs.845	NM_002188	IL13	Interleukin 13
216	Hs.496646	NM_001560	IL13RA1	Interleukin 13 receptor_alpha 1
217	Hs.336046	NM_000640	IL13RA2	Interleukin 13 receptor_alpha 2
218	Hs.168132	NM_172175	IL15	Interleukin 15
219	Hs.524117	NM_002189	IL15RA	Interleukin 15 receptor_alpha
220	Hs.459095	NM_004513	IL16	Interleukin 16 (lymphocyte chemoattractant factor)
221	Hs.41724	NM_002190	IL17	Interleukin 17 (cytotoxic T-lymphocyte-associated_sarineresterase 8)
222	Hs.409558	NM_014443	IL17B	Interleukin 17B
223	Hs.278911	NM_013278	IL17C	Interleukin 17C
224	N/A	N/A	AS1R3	Artificial Sequence 1 Related 3 (70% identity)(43/60)
225	Hs.130652	NM_138284	IL17D	Interleukin 17D
226	Hs.302036	NM_022789	IL17E	Interleukin 17E
227	Hs.272295	NM_052872	IL17F	Interleukin 17F
228	Hs.129751	NM_014339	IL17R	Interleukin 17 receptor
229	Hs.136338	NM_018725	IL17RB	Interleukin 17 receptor_B
230	Hs.83077	NM_001562	IL18	Interleukin 18 (interferon-gamma-inducing factor)
231	Hs.469521	NM_003855	IL18R1	Interleukin 18 receptor_1
232	Hs.158315	NM_003853	IL18RAP	Interleukin 18 receptor accessory protein
233	Hs.128395	NM_013371	IL19	Interleukin 19
234	Hs.1722	NM_000575	IL1A	Interleukin 1_alpha
235	Hs.126256	NM_000576	IL1B	Interleukin 1_beta
236	Hs.306974	NM_173161	IL1F10	Interleukin 1 family_member 10 (theta)
237	Hs.516301	NM_012275	IL1F5	Interleukin 1 family_member 5 (delta)
238	Hs.278910	NM_014440	IL1F6	Interleukin 1 family_member 6 (epsilon)
239	Hs.166371	NM_173205	IL1F7	Interleukin 1 family_member 7 (zeta)
240	Hs.278909	NM_173178	IL1F8	Interleukin 1 family_member 8 (eta)
241	Hs.211238	NM_019618	IL1F9	Interleukin 1 family_member 9
242	Hs.557403	NM_000877	IL1R1	Interleukin 1 receptor_type I
243	Hs.25333	NM_004633	IL1R2	Interleukin 1 receptor_type II
244	Hs.478673	NM_002182	IL1RAP	Interleukin 1 receptor accessory protein
245	Hs.272354	NM_017416	IL1RAP1 2	Interleukin 1 receptor accessory protein-like 2
246	Hs.66	NM_016232	IL1RI 1	Interleukin 1 receptor-like 1
247	Hs.469520	NM_003854	IL1RI 2	Interleukin 1 receptor-like 2
248	Hs.81134	NM_000577	IL1RN	Interleukin 1 receptor antagonist
249	Hs.99679	NM_000586	IL2	Interleukin 2
250	Hs.272373	NM_018724	IL20	Interleukin 20
251	Hs.445868	NM_014432	IL20RA	Interleukin 20 receptor_alpha
252	Hs.567559	NM_021803	IL21	Interleukin 21
253	Hs.210546	NM_021798	IL21R	Interleukin 21 receptor
254	Hs.287369	NM_020525	IL22	Interleukin 22
255	Hs.110915	NM_021258	IL22RA1	Interleukin 22 receptor_alpha 1
256	Hs.126891	NM_052962	IL22RA2	Interleukin 22 receptor_alpha 2
257	Hs.98309	NM_016584	IL23A	Interleukin 23_alpha subunit p19
258	Hs.200929	NM_144701	IL23R	Interleukin 23 receptor
259	Hs.411311	NM_006850	IL24	Interleukin 24
260	Hs.272350	NM_018402	IL26	Interleukin 26
261	Hs.528111	NM_145659	IL27	Interleukin 27
262	Hs.406744	NM_172139	IL28B	Interleukin 28B (interferon_lambda 3)
263	Hs.221375	NM_173065	IL28RA	Interleukin 28 receptor_alpha (interferon_lambda receptor)
264	Hs.406745	NM_172140	IL29	Interleukin 29 (interferon_lambda 1)
265	Hs.231367	NM_000417	IL2RA	Interleukin 2 receptor_alpha
266	Hs.474787	NM_000878	IL2RB	Interleukin 2 receptor_beta
267	Hs.84	NM_000206	IL2RG	Interleukin 2 receptor_gamma (severe combined immunodeficiency)
268	Hs.694	NM_000588	IL3	Interleukin 3 (colony-stimulating factor_multiline)
269	Hs.55378	NM_139017	IL31RA	Interleukin 31 receptor_A
270	Hs.943	NM_004221	IL32	Interleukin 32
271	Hs.567293	NM_002183	IL3RA	Interleukin 3 receptor_alpha (low affinity)
272	Hs.73917	NM_000589	IL4	Interleukin 4
273	Hs.513457	NM_000418	IL4R	Interleukin 4 receptor
274	Hs.2247	NM_000879	IL5	Interleukin 5 (colony-stimulating factor_eosinophil)
275	Hs.68876	NM_000564	IL5RA	Interleukin 5 receptor_alpha
276	Hs.512234	NM_000600	IL6	Interleukin 6 (interferon_beta 2)
277	Hs.135087	NM_000565	IL6R	Interleukin 6 receptor
278	Hs.532082	NM_002184	IL6ST	Interleukin 6 signal transducer (gp130_oncostatin M receptor)
279	Hs.536926	NM_000880	IL7	Interleukin 7
280	Hs.362807	NM_002185	IL7R	Interleukin 7 receptor
281	Hs.624	NM_000584	IL8	Interleukin 8
282	Hs.194778	NM_000634	IL8RA	Interleukin 8 receptor_alpha
283	Hs.846	NM_001557	IL8RB	Interleukin 8 receptor_beta
284	Hs.960	NM_000590	IL9	Interleukin 9
285	Hs.406228	NM_002186	IL9R	Interleukin 9 receptor
286	Hs.407506	NM_002191	INH A	Inhibin_alpha
287	Hs.28792	NM_002192	INH B A	Inhibin_beta A (activin_A_activin AB_alpha polypeptide)
288	Hs.1735	NM_002193	INH B B	Inhibin_beta B (activin AB_beta polypeptide)
289	Hs.89832	NM_000207	INS	Insulin
290	Hs.449207	NM_001570	IRAK2	Interleukin-1 receptor-associated kinase 2
291	Hs.401013	NM_002460	IRE4	Interferon regulatory factor 4
292	Hs.166120	NM_004029	IRE7	Interferon regulatory factor 7
293	Hs.472509	NM_031483	ITCH	Itchy homoln F3 ubiquitin protein ligase (mouse)
294	Hs.174103	NM_002209	ITGB1	Integrin_alpha 1 (antigen_CD11A_Int100_lymphocyte function-associated antigen 1_alpha polypeptide)
295	Hs.375957	NM_000211	ITGB2	Integrin_beta 2 (antigen_CD18_p95_lymphocyte function-associated antigen 1_macrophage antigen 1 (mac-1) beta)
296	Hs.518900	NM_002219	ITIH4	Inter-alpha (fibulin) inhibitor H4 (plasma Kallikrein-sensitive oligoprotein)
297	Hs.1048	NM_003994	KITLG	KIT ligand
298	Hs.77741	NM_000893	KNG1	Kininogen 1
299	Hs.412355	NM_001492	LASS1	LAG1 Innopvity assurance homoln 1 (S_cerevisiae)
300	Hs.154078	NM_004139	LBP	Lipopolysaccharide binding protein
301	Hs.278239	NM_020997	LEFTY1	Left-right determination factor 1
302	Hs.520187	NM_003240	LEFTY2	Left-right determination factor 2
303	Hs.194236	NM_000230	LEP	Leptin (obesity homoln_mouse)
304	Hs.23581	NM_002303	LEPR	Leptin receptor
305	Hs.2250	NM_002309	LIF	Leukemia inhibitory factor (cholinergic differentiation factor)

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Position	UniGene	GenBank	Symbol	Description
306	Hs.133421	NM_002310	LIEB	Leukemia inhibitory factor receptor
307	Hs.36	NM_000595	LTA	Lymphotoxin alpha (TNF superfamily member 1)
308	Hs.524648	NM_000895	LTA4H	Leukotriene A4 hydrolase
309	Hs.376208	NM_002341	LTB	Lymphotoxin beta (TNF superfamily member 3)
310	Hs.567248	NM_181657	LTBR	Leukotriene B4 receptor
311	Hs.529517	NM_002343	LTF	Lactoferrin
312	Hs.153563	NM_002349	LY75	Lymphocyte antigen 75
313	Hs.567394	NM_004271	LY86	Lymphocyte antigen 86
314	Hs.403857	NM_002348	LY9	Lymphocyte antigen 9
315	Hs.69328	NM_015364	LY96	Lymphocyte antigen 96
316	Hs.57732	NM_002751	MAPK11	Mitogen-activated protein kinase 11
317	Hs.485233	NM_001315	MAPK14	Mitogen-activated protein kinase 14
318	Hs.510402	NM_172361	MCP	Membrane cofactor protein (CD46, trophoblast-lymphocyte cross-reactive antigen)
319	Hs.82045	NM_002391	MDK	Midkine (neurite growth-promoting factor 2)
320	Hs.173730	NM_000243	MFEV	Mediterranean fever
321	Hs.277035	NM_007283	MGL1	Monoglucosylase
322	Hs.407995	NM_002415	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
323	Hs.312579	NM_022468	MMP25	Matrix metalloproteinase 25
324	Hs.82906	NM_005373	MPI	Melanoproliferative leukemia virus oncogene
325	Hs.369646	XM_379688	MUC4	Mucin 4, tracheobronchial
326	Hs.82116	NM_002469	MYD88	Mycoid differentiation primary response gene (88)
327	Hs.367965	NM_033297	NALP12	NALP12, leucine rich repeat and PYD containing 12
328	Hs.509513	NM_147130	NCR3	Natural cytotoxicity triggering receptor 3
329	Hs.436677	NM_145912	NEFAM1	NEFAM1, activation protein with ITAM motif 1
330	Hs.344716	NM_004555	NEATC3	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3
331	Hs.77810	NM_004554	NEATC4	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4
332	Hs.514284	NM_003204	NEF2L1	Nuclear factor (erythroid-derived 2)-like 1
333	Hs.431926	NM_003998	NEK1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (n105)
334	Hs.530539	NM_006165	NERKB	Nuclear factor related to kappaB binding protein
335	Hs.413074	NM_002504	NFX1	Nuclear transcription factor, X-box binding 1
336	Hs.54483	NM_004688	NMI	N-myc (and STAT) interactor
337	Hs.370414	NM_018055	NODAL	Nodal homolog (mouse)
338	Hs.462525	NM_153292	NOS2A	Nitric oxide synthase 2A (inducible, hepatocytes)
339	Hs.128105	NM_024505	NOX5	NADPH oxidase, FF-hand calcium binding domain 5
340	Hs.122926	NM_000176	NR3C1	Nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor)
341	Hs.165258	NM_006186	NR4A2	Nuclear receptor subfamily 4, group A, member 2
342	Hs.412484	NM_002543	OLR1	Oxidized low density lipoprotein (lectin-like) receptor 1
343	Hs.248156	NM_020530	OSM	Oncostatin M
344	Hs.120658	NM_003999	OSMR	Oncostatin M receptor
345	Hs.117825	NM_006437	PARP4	Polv (ADP-ribose) polymerase family member 4
346	Hs.126365	NM_016734	PAX5	Paired box gene 5 (B-cell lineage specific activator)
347	Hs.489615	NM_182790	PBEF1	Pre-B-cell colony enhancing factor 1
348	Hs.376032	NM_002607	PDGFA	Platelet-derived growth factor alpha polypeptide
349	Hs.1976	NM_002608	PDGFB	Platelet-derived growth factor beta polypeptide (simian sarcoma viral (v-sis) oncogene homolog)
350	Hs.72833	NM_002620	PF4V1	Platelet factor 4 variant 1
351	Hs.189507	NM_012400	PLA2G2D	Phospholipase A2, group IID
352	Hs.554780	NM_005084	PLA2G7	Phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma)
353	Hs.2407	NM_006235	POLR2A1	POLR domain class 2, associating factor 1
354	Hs.515429	NM_002698	POLR2F2	POLR domain class 2, transcription factor 2
355	Hs.2164	NM_002704	PPBP	Pro-platelet basic protein (chemokine (C-X-C motif) ligand 7)
356	Hs.502823	NM_181652	PRDX5	Peroxiredoxin 5
357	Hs.153310	NM_020820	PREX1	Phosphatidylinositol 3,4,5-trisphosphate-dependent RAC exchanger 1
358	Hs.512633	NM_002728	PRG2	Proteoglycan 2, bone marrow (natural killer cell activator, eosinophil granule major basic protein)
359	Hs.251386	NM_006093	PRG3	Proteoglycan 3
360	Hs.1905	NM_000948	PRL	Prolactin
361	Hs.368587	NM_000949	PRLR	Prolactin receptor
362	Hs.82353	NM_006404	PROCR	Protein C receptor, endothelial (EPCR)
363	Hs.509736	NM_007355	HSPCB	Heat shock 90kDa protein 1, beta
364	Hs.528665	NM_021935	PROK2	Prokineticin 2
365	Hs.77542	NM_000852	PTAER	Platelet-activating factor receptor
366	Hs.196384	NM_000863	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
367	Hs.371249	NM_002825	PTN	Pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1)
368	Hs.269577	NM_002836	PTPRA	Protein tyrosine phosphatase, receptor type, A
369	Hs.567326	NM_002852	PTX3	Pentraxin-related gene, rapidly induced by IL-1, beta
370	Hs.430299	NM_018663	PXMP2	Peroxisomal membrane protein 2, 22kDa
371	Hs.567312	NM_002580	REG3A	Regeneration islet-derived 3, alpha
372	Hs.447084	NM_198448	REG3G	Regeneration islet-derived 3, gamma
373	Hs.296776	NM_003721	REXANK	Regulatory factor X-associated ankyrin-containing protein
374	Hs.103755	NM_003821	RIPK2	Receptor-interacting serine-threonine kinase 2
375	Hs.19413	NM_005621	S100A2	S100 calcium binding protein A12 (calgranulin C)
376	Hs.416073	NM_002894	S100A9	S100 calcium binding protein A9 (calgranulin A)
377	Hs.422181	NM_006072	S100B	S100 calcium binding protein, beta (neurin)
378	Hs.509736	NM_007355	HSPCB	Heat shock 90kDa protein 1, beta
379	Hs.1955	NM_030754	SAA2	Serum amyloid A2
380	Hs.454496	AY209188	SAA3P	Serum amyloid A3 nucleonone
381	Hs.512677	NM_006512	SAA4	Serum amyloid A4, constitutive
382	Hs.523732	NM_003357	SCGB1A1	Secretoglobin family 1A, member 1 (uteroglobin)
383	Hs.62492	NM_052863	SCGB3A1	Secretoglobin family 3A, member 1
384	Hs.133995	NM_173050	SCUBE1	Signal peptide, CUB domain, EGF-like 1
385	Hs.480465	NM_004757	SCYE1	Small inducible cytokine subfamily E, member 1 (endothelial monocyte-activating)
386	Hs.200804	NM_005625	SDCBP	Syndecan binding protein (svnterin)
387	Hs.558009	NM_003004	SECTM1	Secreted and transmembrane 1
388	Hs.89546	NM_000450	SELE	Selectin E (endothelial adhesion molecule 1)
389	Hs.525557	NM_000295	SERPINA1	Serpin peptidase inhibitor, clade A (alpha-1 antitrypsinase, antitrypsin), member 1
390	Hs.510334	NM_001085	SERPINA3	Serpin peptidase inhibitor, clade A (alpha-1 antitrypsinase, antitrypsin), member 3
391	Hs.159509	NM_000934	SERPINF2	Serpin peptidase inhibitor, clade F (alpha-2 antiplastin, pigment epithelium derived factor), member 2
392	Hs.384598	NM_000062	SERPING1	Serpin peptidase inhibitor, clade G (C1 inhibitor), member 1 (angioedema hereditary)
393	Hs.509736	NM_007355	HSPCB	Heat shock 90kDa protein 1, beta
394	Hs.253495	NM_003019	SFTPD	Surfactant, pulmonary-associated protein D
395	Hs.501624	NM_021805	SIGIRR	Single immunoglobulin and toll-interleukin 1 receptor (TIR) domain
396	Hs.31869	NM_023068	SIGLEC1	Sialic acid binding Ig-like lectin 1, sialoadhesin
397	Hs.112058	NM_006427	SIVA	CD27-binding (SIVA) protein
398	Hs.617020	NM_175077	SLA2	SrL-like adaptor 2
399	Hs.46440	NM_005075	SLC01A2	Solute carrier organic anion transporter family member 1A2
400	Hs.103595	NM_020427	SLURP1	Secreted LY6/PLAUR domain containing 1
401	Hs.485672	NM_003977	SOCS2	Suppressor of cytokine signaling 2
402	Hs.434112	NM_173847	SPACA3	Sperm acrosome associated 3
403	Hs.461934	NM_003123	SPN	Sialoprotein (gp115, leukosialin, CD43)
404	Hs.313	NM_000582	SPP1	Secreted phosphoprotein 1 (osteopontin, bone sialoprotein 1, early T-lymphocyte activation 1)
405	Hs.525781	NM_152594	SPRED1	Sprouty-related, EVH1 domain containing 1
406	Hs.450763	NM_020762	SRGAP1	SLIT-ROBO Rho GTPase activating protein 1
407	Hs.301989	NM_015136	STAB1	Stabilin 1
408	Hs.509736	NM_007355	HSPCB	Heat shock 90kDa protein 1, beta
409	Hs.567649	NM_003150	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
410	Hs.371720	NM_003177	SYK	Spleen tyrosine kinase

## Product Specification Sheet

Position	UniGene	GenBank	Symbol	Description
411	Hs.200262	NM_001058	TACR1	Tachykinin receptor 1
412	Hs.1103	NM_000660	TGFB1	Transforming growth factor, beta 1 (Camurati-Engelmann disease)
413	Hs.133379	NM_003238	TGFB2	Transforming growth factor, beta 2
414	Hs.2025	NM_003239	TGFB3	Transforming growth factor, beta 3
415	Hs.494622	NM_004612	TGFBRL1	Transforming growth factor, beta receptor I (activin A receptor type II-like kinase, 53kDa)
416	Hs.82028	NM_003242	TGFBRL2	Transforming growth factor, beta receptor II (70/80kDa)
417	Hs.1166	NM_000460	THPO	Thrombopoietin (myeloproliferative leukemia virus oncogene, ligand, megakaryocyte growth and development factor)
418	Hs.537126	NM_052887	TIRAP	Toll-interleukin 1 receptor (TIR) domain containing adaptor protein
419	Hs.111805	NM_003263	TLR1	Toll-like receptor 1
420	Hs.120551	NM_030956	TLR10	Toll-like receptor 10
421	Hs.519033	NM_003264	TLR2	Toll-like receptor 2
422	Hs.29499	NM_003265	TLR3	Toll-like receptor 3
423	Hs.174312	NM_003266	TLR4	Toll-like receptor 4
424	Hs.114408	NM_003268	TLR5	Toll-like receptor 5
425	Hs.366986	NM_006068	TLR6	Toll-like receptor 6
426	Hs.443036	NM_016562	TLR7	Toll-like receptor 7
427	Hs.272410	NM_016610	TLR8	Toll-like receptor 8
428	Hs.87968	NM_017442	TLR9	Toll-like receptor 9
429	Hs.241570	NM_000594	TNF	Tumor necrosis factor (TNF superfamily member 2)
430	Hs.437322	NM_007115	TNFAIP6	Tumor necrosis factor, alpha-induced protein 6
431	Hs.81791	NM_002846	TNFRSF11B	Tumor necrosis factor receptor superfamily member 11b (osteoprotegerin)
432	Hs.278594	NM_001065	TNFRSF1A	Tumor necrosis factor receptor superfamily member 1A
433	Hs.520640	NM_011101	ACTB	Actin, beta
434	Hs.256278	NM_001066	TNFRSF1B	Tumor necrosis factor receptor superfamily member 1B
435	Hs.443577	NM_014452	TNFRSF21	Tumor necrosis factor receptor superfamily member 21
436	Hs.355307	NM_001242	TNFRSF7	Tumor necrosis factor receptor superfamily member 7
437	Hs.1314	NM_001243	TNFRSF8	Tumor necrosis factor receptor superfamily member 8
438	Hs.193418	NM_001561	TNFRSF9	Tumor necrosis factor receptor superfamily member 9
439	Hs.478275	NM_003810	TNFRSF10	Tumor necrosis factor (ligand) superfamily member 10
440	Hs.333791	NM_003701	TNFRSF11	Tumor necrosis factor (ligand) superfamily member 11
441	Hs.54673	NM_003808	TNFRSF13	Tumor necrosis factor (ligand) superfamily member 13
442	Hs.525157	NM_006573	TNFRSF13B	Tumor necrosis factor (ligand) superfamily member 13b
443	Hs.129708	NM_003807	TNFRSF14	Tumor necrosis factor (ligand) superfamily member 14
444	Hs.241382	NM_005118	TNFRSF15	Tumor necrosis factor (ligand) superfamily member 15
445	N/A	L08752	PUC18	PUC18 Plasmid DNA
446	N/A	AF000461	Pol1	Escherichia coli K12 MG1655 section 351 of 400 of the complete genome
447	Blank	Blank	Blank	Blank
448	Blank	Blank	Blank	Blank
449	Hs.520640	NM_001101	ACTB	Actin, beta
450	Blank	Blank	Blank	Blank
451	Blank	Blank	Blank	Blank
452	Hs.248197	NM_005092	TNFRSF18	Tumor necrosis factor (ligand) superfamily member 18
453	Hs.181097	NM_003326	TNFRSF4	Tumor necrosis factor (ligand) superfamily member 4 (tax-transcriptionally activated glycoprotein 1, 34kDa)
454	Hs.501497	NM_001252	TNFRSF7	Tumor necrosis factor (ligand) superfamily member 7
455	Hs.494901	NM_001244	TNFRSF8	Tumor necrosis factor (ligand) superfamily member 8
456	Hs.1524	NM_003811	TNFRSF9	Tumor necrosis factor (ligand) superfamily member 9
457	Hs.368527	NM_019009	TOLLIP	Toll interacting protein
458	Hs.421194	NM_003596	TSP1	Tyrosinprotein sulfotransferase 1
459	Hs.30345	NM_016292	TRAF1	TNF receptor-associated protein 1
460	N/A	X03205	18S rRNA	Human 18S ribosomal RNA
461	Hs.256639	NM_006347	PPIH	Pentidyl ornithyl isomerase, H (cyclophilin H)
462	Hs.134084	NM_002355	M6PR	Mannose-6-phosphate receptor (cation dependent)
463	Hs.533282	NM_007363	NONO	Non-POU domain containing, octamer-binding
464	Hs.2795	NM_005566	LDHA	Lactate dehydrogenase A
465	Hs.520640	NM_001101	ACTB	Actin, beta
466	Hs.520640	NM_001101	ACTB	Actin, beta
467	Hs.134602	NM_003319	TTN	Titin
468	Hs.73793	NM_003376	VEGF	Vascular endothelial growth factor
469	Hs.78781	NM_003377	VEGFB	Vascular endothelial growth factor B
470	Hs.443750	NM_007259	VPS45A	Vacuolar protein sorting 45A (yeast)
471	Hs.546295	NM_002995	XCL1	Chemokine (C motif) ligand 1
472	Hs.248116	NM_005283	XCR1	Chemokine (C motif) receptor 1
473	Hs.213264	NM_003680	YARS	Tyrosyl-tRNA synthetase
474	Hs.388927	NM_003403	YY1	YY1 transcription factor
475	Hs.524920	NM_053023	ZFP91	Zinc finger protein 91 homolog (mouse)
476	N/A	N/A	BAS2C	Biotinylated Artificial Sequence 2 Complementary sequence
477	N/A	N/A	BAS2C	Biotinylated Artificial Sequence 2 Complementary sequence
478	N/A	N/A	BAS2C	Biotinylated Artificial Sequence 2 Complementary sequence
479	N/A	N/A	BAS2C	Biotinylated Artificial Sequence 2 Complementary sequence
480	N/A	N/A	BAS2C	Biotinylated Artificial Sequence 2 Complementary sequence

Oligo GEArray<sup>®</sup> Human Autoimmune and Inflammatory Response Microarray

**Related Products**

Product	Cat No.
<b>Oligo GEArray Reagent Kit</b> Reagents for target synthesis, hybridization, and detection of 12 arrays	GA-034
<b>GEArray Express Thermoshaker</b> Hybridization and Washing of up to 16 arrays (2 plates) Hybridization and Washing of up to 32 arrays (4 plates)	GXE-TS2 GXE-TS4
<b>GEArray Express Multi-Chamber HybPlates</b> Four (4) plates and seals for hybridization and washing up to 32 arrays	GA-035
<b>ArrayGrade™ Total RNA Isolation Kit</b> Reagents for preparation of Total RNA from 12 samples	GA-013
<b>ArrayGrade™ FFPE RNA Isolation Kit</b> Reagents for RNA preparation from 12 FFPE samples	GA-023
<b>TrueLabeling-AMP™ 2.0 Kit</b> cRNA Target Synthesis and Labeling Reagents for 12 arrays	GA-030
<b>TrueLabeling-PicoAMP™ Kit</b> Small RNA sample cRNA target Synthesis & Labeling for 12 arrays	GA-130
<b>ArrayGrade™ cRNA Cleanup Kit</b> Purify cRNA Target for 12 arrays	GA-012
<b>GEAhyb Hybridization Solution</b> Hybridization and Washing of 16 arrays	H-01
<b>Chemiluminescent Detection Kit</b> Detection of biotinylated cRNA target on 12+ arrays	D-01
<b>RNASafer™ RNA Stabilization Reagent</b> RNA Sample Preparation / Storage (100 ml)	GA-008
<b>Human XpressRef™ Reference Universal Total RNA</b> RNA Reference Control (100 µg, enough for 12+ arrays)	GA-004