

nCounter®

Gx Human Inflammation Kit

A Gene Set You Can Count On

The nCounter GX Mouse Inflammation Kit is a comprehensive set of 248 inflammation-related mouse genes and six internal reference genes. These represent a broad range of relevant pathways related to inflammation, including:

- Apoptosis
- EGF
- Interleukin signaling
- Ras
- T-cell receptor
- Toll-like receptor signalling

This gene list was compiled by querying several public databases for inflammation-related genes. Each gene was verified to be differentially expressed under conditions leading to inflammation.

Verification was performed using MSigDB, a repository of gene expression data developed by researchers at the Massachusetts Institute of Technology and the Broad Institute¹. Other public databases were used to obtain functional gene expression information for each gene. The final nCounter GX Mouse Inflammation Kit consists of 248 inflammation-related genes and six internal reference genes.

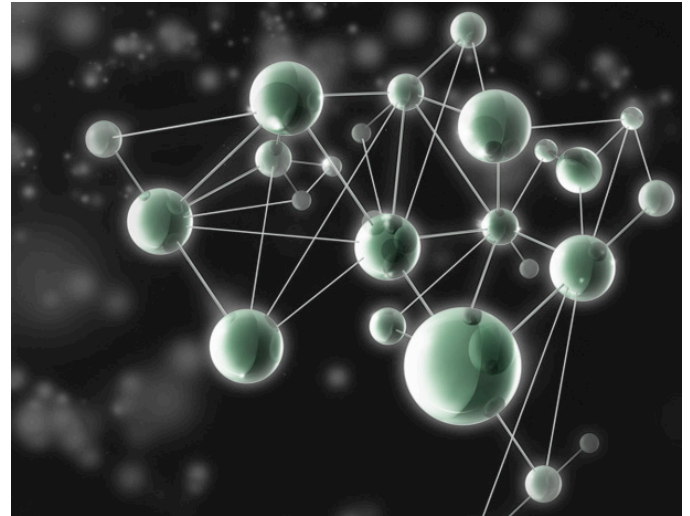
For the gene list and additional information about this gene set, visit the nCounter Pre-built Panels product page at www.nanostring.com.

1. Subramanian A, Tamayo P, et al. (2005) Gene set enrichment analysis: a knowledge-based approach for interpreting genome-wide expression profiles. *Proc Natl Acad Sci USA* 102(43):15545-15550.

nCounter Analysis System Overview

The nCounter Analysis System from NanoString offers a cost-effective way to easily profile hundreds of gene transcripts simultaneously with high sensitivity and precision. The digital detection of target molecules and high levels of multiplexing eliminate the compromise between data quality and data quantity, bringing better sensitivity, reproducibility, and linearity to your results. It is ideal for studying defined gene sets across a large sample set, e.g., microarray validation, pathway analysis, biomarker validation, and splice variation analysis.

The system utilizes a novel digital technology that is based on direct multiplexed measurement of gene expression and offers high levels of precision and sensitivity (<1 copy per cell). The technology uses molecular “barcodes” and single-molecule imaging to detect and count hundreds of unique transcripts in a single reaction.



Product Highlights

Simple

- No need for cross-referencing databases

Highly Curated

- Our expert bioinformaticists use a very rigorous process in selecting the most meaningful set of genes

Efficient

- Multiplexed assay profiles 248 inflammation-related genes in one reaction

Cost-effective

- Gold standard data at a fraction of the cost

Quick Turnaround Time

- Complete kit with all consumables ready to ship next-day

Included

Genes List							
AGER	CCL4	CXCR1	IFI44	IL6	MAPKAPK2	PIK3C2G	TCF4
ALOX12	CCL5	CXCR2	IFIT1	IL6RA	MAPKAPK5	PLA2G4A	TGFB1
ALOX15	CCL7	CXCR4	IFIT2	IL7	MASP1	PLCB1	TGFB2
ALOX5	CCL8	CYSLTR1	IFIT3	IL9	MASP2	PPP1R12B	TGFB3
AREG	CCR1	CYSLTR2	IFNA1	IRF1	MAX	PRKCA	TGFBR1
ARG1	CCR2	DAXX	IFNB1	IRF3	MBL2	PRKCB	TLR1
ATF2	CCR3	DDIT3	IFNG	IRF5	MEF2A	PTGER1	TLR2
BCL2L1	CCR4	DEFA-RS1	IIGP1	IRF7	MEF2B	PTGER2	TLR3
BCL6	CCR7	ELK1	IL10	ITGB2	MEF2C_MM	PTGER3	TLR4
BIRC2	CD163	FASL	IL10RB	JUN	MEF2D	PTGER4	TLR5
C1QA	CD4	FLT1	IL11	KEAP1	MKNK1	PTGFR	TLR6
C1QB	CD40	FOS	IL12A	KNG1	MMP3	PTGIR	TLR7
C1RA	CD40LG	FXRD2	IL12B	LIMK1	MMP9	PTGS1	TLR8
C1S	CD55	GNAQ	IL13	LTA	MRC1	PTGS2	TLR9
C2	CD86	GNAS	IL15	LTB	MX1	PTK2	TNF
C3	CDC42	GNB1	IL17A	LTB4R1	MX2	RAC1	TNFAIP3
C3AR1	CEBPB	GNGT1	IL18	LTB4R2	MYC	RAF1	TNFSF14
C4A	CFB	GPR44	IL18RAP	LY96	MYD88	RAPGEF2	TOLLIP
C6	CFD	GRB2	IL1A	MAFF	MYL2	RELA	TRADD
C7	CFL1	H2-EA-PS	IL1B	MAFG	NFATC3	RELB	TRAF2
C8A	CHI3L3	H2-EB1	IL1R1	MAFK	NFE2L2	RETNLA	TREM2
C8B	CREB1	HC	IL1RAP	MAP2K1	NFKB1	RHOA	TSLP
C9	CRP	HDAC4	IL1RN	MAP2K4	NLRP3	RIPK1	TWIST2
CCL11	CSF1	HIF1A	IL2	MAP2K6	NOD1	RIPK2	TYROBP
CCL17	CSF2	HMGB1	IL21	MAP3K1	NOD2	ROCK2	
CCL19	CSF3	HMGB2	IL22	MAP3K5	NOS2	RPS6KA5	
CCL2	CXCL1	HMGNI	IL22RA2	MAP3K7	NOX1	SHC1	CLTC*
CCL20	CXCL10	HRAS1	IL23A	MAP3K9	NR3C1	SMAD7	GAPDH*
CCL21A	CXCL2	HSH2D	IL23R	MAPK1	OAS1A	STAT1	GUSB*
CCL22	CXCL3	HSPB1	IL3	MAPK14	OAS2	STAT2	HPRT*
CCL24	CXCL5	HSPB2	IL4	MAPK3	OASL1	STAT3	PGK1*
CCL3	CXCL9	IFI27L2A	IL5	MAPK8	PDGFA	TBXA2R	TUBB5*

*Internal Reference Genes

Assay Performance

Description	
Level of multiplexing	248 genes known to be differentially expressed in mouse inflammation
Recommended amount of starting material	100 ng or less of total RNA, or lysate from ~10,000 cells
Sample types supported	Total RNA, cell lysates in GITC, FFPE-derived total RNA and PAXgene lysed whole blood, amplified RNA
Limit of detection	15 zeptomole spike-in control (~1 copy per cell); 90% of the time
Fold change sensitivity	> 1.5 fold (> 5 copies per cell) > 2 fold change (> 1 copy per cell)
Spike correlation	R2 ≥ 0.95
Linear dynamic range	7 x 10 ⁵ total counts
Controls	6 positive and 8 negative in each reaction

Ordering Information

Description	Quantity / Use	Part Number (P/N)
nCounter	12 assays	XT-GXA-MIN2-12
Gx Mouse	24 assays	XT-GXA-MIN2-24
Inflammation	48 assays	XT-GXA-MIN2-48
Kit	96 assays	XT-GXA-MIN2-96

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