

nCounter® Virtual JAK-STAT Pathway Gene Set

Product Highlights

- **Simple**
No more days spent cross referencing databases
- **Highly curated**
Our expert bioinformaticists use a very rigorous process to select the most meaningful set of genes
- **Efficient**
Multiplexed assay profiles 86 JAK-STAT-related genes in one reaction
- **Cost-effective**
Gold-standard data at a fraction of the cost

A Gene Set You Can Count On

The nCounter Virtual JAK-STAT Pathway Gene Set is a comprehensive set of 86 human JAK-STAT signaling pathway genes and six internal reference genes. These represent a broad range of relevant biological processes, including:

- apoptosis
- cell proliferation
- cytokine-mediated signaling
- hemopoiesis
- inflammatory response
- peptidyl-tyrosine phosphorylation

With the nCounter Virtual JAK-STAT Pathway Gene Set, scientists can leverage a pre-designed panel to accelerate their research and quickly generate expression data for a large set of JAK-STAT signaling pathway genes. For the gene list and additional information about this gene set, please visit the nCounter Virtual Gene Set product page at www.nanostring.com.

Product Specifications

Critical Specifications	
Level of Multiplexing	86 genes known to be differentially expressed in JAK-STAT
Recommended Amount of Starting Material	100ng 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
Reaction Volume	30 µL
Limit of Detection	0.5fM 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

Genes Included							
CISH	EPOR	IL11RA	IL2RB	IL7R	OSM	SOCS4	TSLP
CLCF1	GHR	IL12A	IL2RG	IL9	OSMR	SOCS5	TYK2
CNTF	IFNAR1	IL12B	IL3	IL9R	PIAS1	STAM	
CNTFR	IFNAR2	IL12RB1	IL3RA	IRF9	PIAS2	STAM2	
CREBBP	IFNB1	IL12RB2	IL4	JAK1	PIM1	STAT1	
CSF2	IFNG	IL13	IL4R	JAK2	PRL	STAT2	
CSF2RA	IFNGR1	IL13RA1	IL5	JAK3	PRLR	STAT3	CLTC*
CSF3	IFNGR2	IL13RA2	IL5RA	LEP	PTPN11	STAT4	GAPDH*
CSF3R	IL10	IL15	IL6	LEPR	PTPN6	STAT5A	GUSB*
CTF1	IL10RA	IL15RA	IL6R	LIF	SOCS1	STAT5B	HPRT1*
EP300	IL10RB	IL2	IL6ST	LIFR	SOCS2	STAT6	PGK1*
EPO	IL11	IL2RA	IL7	MPL	SOCS3	THPO	TUBB*

*Internal Reference Genes

Nanostring acknowledges Ingenuity® Systems, Inc. (www.ingenuity.com) pathway tools used in the development of the gene list and supporting biological and chemical content.

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.

Ordering Information

Description	Quantity/Use	P/N
nCounter Virtual JAK-STAT Pathway Gene Set	48 Assays	GXA-VJS1-048
	96 Assays	GXA-VJS1-096
	192 Assays	GXA-VJS1-192
	384 Assays	GXA-VJS1-384
nCounter Master Kit	48 Assays	NAA-AKIT-048
All reagents, sample cartridges, and consumables necessary for processing 48 or 192 assays.	192 Assays	NAA-AKIT-192



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