

# Explore the Biology Behind Veterinary Medicine

## with nCounter® Gene Expression Analysis

Pathway-based gene expression studies have been used in veterinary medicine to improve the health and quality of life of domestic and companion animals such as cows, chickens, sheep, dogs, and cats.

nCounter Gene Expression Assays reduce time to data with a simple workflow of less than 15 minutes hands-on time and streamlined analysis, generating results in under 24 hours.

- Profile up to 800 genes from a single sample
- Flexible content allows you to select the organism/genes of your choice
- Compatible with total RNA and crude lysate
- No amplification, RT or library prep with as little as 25 ng RNA
- nCounter platform cited in peer reviewed publications
- No technical replicates required due to direct, digital counting
- Sample multiplexing with PlexSet reagents allows you to profile 96 genes in 96 samples at once, generating 9,216 data points



### Custom Solutions

Affordable for every lab and project

Product	Assay Type	Maximum Targets	Daily Sample Throughput
Custom CodeSets	User-designed, turn-key solution that comes ready-to-use	800	24-96
Elements™ TagSets	Self-assembled, interchangeable probes, optimized for smaller validation projects with maximum flexibility.	216	24-96
PlexSet™ Reagents	Self-assembled, interchangeable probes for high-throughput, sample multiplexing projects	96	192-1152

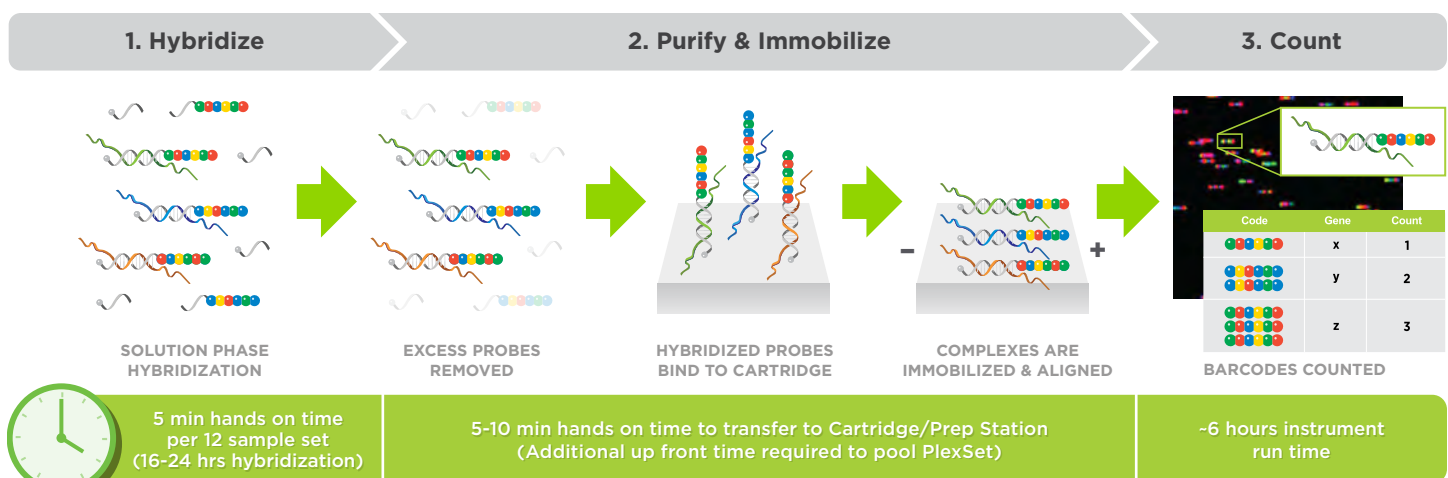
### DID YOU KNOW?

nCounter probe sets have been designed for over 300 species, and there have been more than 6,000 probe designs made to date.

Common Species for Domestic and Companion Animals Design Requests

- Dog
- Cow
- Sheep
- Pig
- Horse
- Chicken
- Rabbit
- Cat

## nCounter Workflow for Custom Gene Expression Assays



## Probe Design

Probe sequences are designed by NanoString bioinformaticians free of charge. Probes can be designed for any species of interest with a known transcriptome sequence.

### 1 SELECT GENES

Submit your RefSeq IDs to NanoString.

#### LEAD TIME

Customer-defined

### 2 PROBE DESIGN

NanoString designs probes, then creates and sends a Design Report.

#### LEAD TIME

3-5 days

### 3 CUSTOMER REVIEW

Customer reviews and approves Design Report.

#### LEAD TIME

Customer-defined

### 4 MANUFACTURE AND SHIP

NanoString manufactures and ships product to customer.

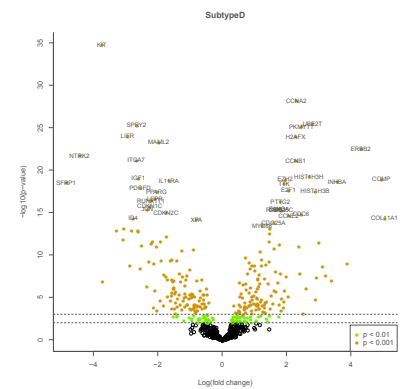
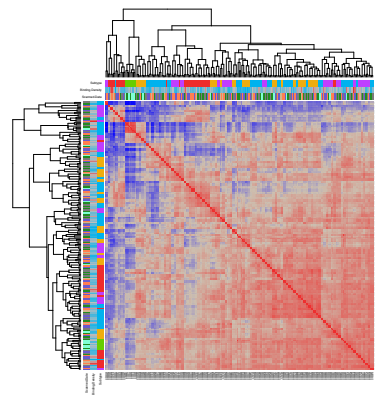
#### LEAD TIME

Custom CodeSets: 3-5 weeks  
Elements TagSets and PlexSet reagents: 1-3 days (*customer orders oligo probes from 3rd party using provided sequences*)

## Data Analysis

Generate highly-customizable reports, basic statistical outputs and publication-quality figures quickly and easily with our data analysis software.

- Recommended quality control on samples/lanes
- Tunable normalization and fold-change measurements
- Statistical significance testing



## Selected Publications:

1. Genis, S et al. Effect of metritis on endometrium tissue transcriptome during puerperium in Holstein lactating cows. *Theriogenology*. 2018;122:116-23.
2. Dhawan, D et al. Naturally-occurring canine invasive urothelial carcinoma harbors luminal and basal transcriptional subtypes found in human muscle invasive bladder cancer. *PLoS Genet*. 2018;14(8).
3. Heiser, A et al. Pegbovigrastim treatment affects gene expression in neutrophils of pasture-fed, periparturient cows. *J Dairy Sci*. 2018; 101(9):8194-8207.
4. Zylberberg, M et al. Avian keratin disorder of Alaska black-capped chickadees is associated with Poecivirus infection. *Virol J*. 2018;15(1):100.
5. Griffin, J et al. Temporal embryonic transcription of chicken fast skeletal myosin heavy chain isoforms in the single comb white leghorn. *Poult Sci*. 2016;95(5):1151-55.
6. O'Connor, CM et al. Adoptive T-cell therapy improves treatment of canine non-Hodgkin lymphoma post chemotherapy. *Sci Rep*. 2012;2:249.

Contact your local representative for a project consultation today and visit our website for more information: [nanosttring.com/custom-solutions](http://nanosttring.com/custom-solutions)

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