NanoString Panel Pro User Guide

Panel Pro is an interactive tool on the NanoString website designed to help you browse nCounter® gene expression panels by application area, pathway, biological process, and/or gene(s). Search our library of inventoried and made-to-order panels for particular genes or upload a gene list to compare your own curated content with specific panels. Compare your gene list to multiple panels or compare multiple panels to each other. As always, please contact bioinformatics@nanostring.com for help with Custom CodeSet designs!

In this user guide, you'll learn how to search for a panel, application area, pathway, or biological process as well as to search for particular genes and compare panels to one another or to an uploaded gene list.

Let's get started!

How to Search for a Panel

①   Enter the search term in 'Browse Panels' and click on 'Search Panels'

②   Browse gene content in the panel by clicking on the 'Human' or 'Mouse' versions of the panel

③ Browse the gene list as a table or by annotation groups or download the gene list
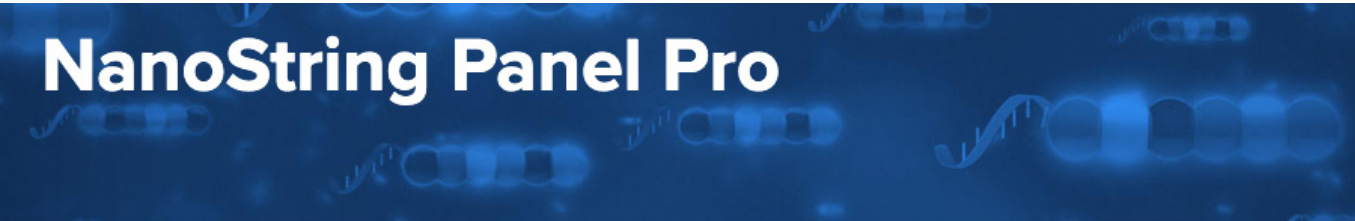
Home > Panels > Panel Detail

PanCancer IO 360

Application:	Oncology
Species:	Human
# of Genes:	770
Annotations:	24

750 cancer-related genes involved in the complex interplay between the tumor, microenvironment and immune response including 20 internal reference controls.

Genes Show as: **Table of genes** ① **Annotation groups** ② **Download Gene List** ⬇ ③

How to Search for an Application Area

① Click on an application area of interest

Choosing the right gene expression panel for your research is now easier with the NanoString Panel Pro panel selection tool! Browse our catalog of inventori and made-to-order panels by name, application area, biologic pathway/process, or gene name(s). Upload your own gene lists to find the panel that best matc your selection or compare gene coverage across multiple panel types.
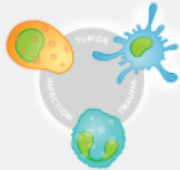
As always, reach out to **bioinformatics@nanostring.com** for help with **Custom CodeSet** designs!

Browse Panels   **View all panels**
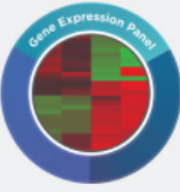
Enter panel name, gene symbol, annotation

By application	By pathway	By biological process
Neuroscience	A1 Astrocyte	actin cytoskeleton organization
Oncology	A2 Astrocyte	actin cytoskeleton reorganization
Immunology	Activated B-cells	actin filament bundle assembly
	View all >	View all >

② View the list of panels in the selected application area

Myeloid Innate Immunity V2

Human ⊕ Mouse ⊕

The human and mouse nCounter Myeloid Innate Immunity panels are designed to encompass all aspects of the myeloid innate immune response for use in basic and translational.... show more

Application:	Immunology, Oncology
Species:	Human, Mouse
Genes in panel:	770, 754
Panel type:	Inventoried

Allergic Response

Human ⊕ Mouse ⊕

This gene list contains 90 genes for the study of the allergic response and 6 reference genes to be used for normalization. The allergic immune response is characterized .... show more

Application:	Immunology
Species:	Human, Mouse
Genes in panel:	96, 90
Panel type:	Made to order

How to Search for a Pathway

① Click on 'View All' underneath the 'By pathway' section and scroll to find the pathway of choice

Browse Panels

View all panels

Enter panel name, gene symbol, annotation

By application	By pathway	By biological process
Neuroscience	A1 Astrocyte	actin cytoskeleton organization
Oncology	A2 Astrocyte	actin cytoskeleton reorganization
Immunology	Activated B-cells	actin filament bundle assembly
	View all >	View all >

All pathways   Hide

Activation	Activation Markers	Adaptive	Adaptive Immune Response	Adaptive Immune System
Adaptive Immunity	Adenosine Pathway	Adhesion	Adhesion and Migration	Amino Acid Synthesis
Amino Acid Transporters	AMPK	Androgen Signaling	Angiogenesis	Angiogenesis Response
Antigen Presentation	Antigen Processing	Antigen Processing and Present...	Antigen Recognition and Prese...	Apoptosis
Apoptosis & Cell Cycle Regulati...	Apoptosis & DNA ...ge	Apoptosis and Cell Killing	Arginine Metabolism	Astrocyte Differentiation/Function
Astrocyte Function	Astrocyte Markers	Autoantigens	Autophagy	Axon and Dendrite Structure
B-cell activation	B-cell Function	B-cell Functions	B-cell proliferation	B-cell Receptor Signaling
B-cell Signaling	Basal Lamina	Base Excision Repair	Basement Membrane	Basic Cell Functions

2   View the list of panels that contain the selected pathway

How to Search for a Biological Process

1   Click on 'View All' under 'By biological process'. Scroll to find the biological process of choice

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② View the list of panels that contain the selected biological process

CAR-T Characterization

Human ⊕

770 CAR-T related genes plus 10 internal reference controls.

Application:	Oncology
Species:	Human
Genes in panel:	780
Panel type:	Inventoried

Myeloid Innate Immunity V2

Human ⊕ Mouse ⊕

The human and mouse nCounter Myeloid Innate Immunity panels are designed to encompass all aspects of the myeloid innate immune response for use in basic and translational.... show more

Application:	Immunology, Oncology
Species:	Human, Mouse
Genes in panel:	770, 754
Panel type:	Inventoried

PanCancer Pathways

Human ⊕ Mouse ⊕

770 genes for essential cancer pathways including 40 internal reference controls for the human panel & 20 for the mouse panel.

Application:	Oncology
Species:	Human, Mouse
Genes in panel:	770, 770
Panel type:	Inventoried

How to Search for a Gene

① Enter the gene name(s) of interest separated by a comma and click on 'Search Panels

Browse Panels   View all panels

Enter panel name, gene symbol, annotation

By application	By pathway	By biological process
Neuroscience	A1 Astrocyte	actin cytoskeleton organization
Oncology	A2 Astrocyte	actin cytoskeleton reorganization
Immunology	Activated B-cells	actin filament bundle assembly
	View all >	View all >

Search By Gene List   Download template   ⬆ Upload list

ACE2
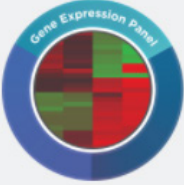
①

②

Values entered: 1   Search Panels

② Browse the list of panels that contain the selected gene

Home > Panels

Show [All applications ▼] [All species ▼] [All types ▼] Compare (1) [10 ▼] per page

Blood Pressure Regulation
Human ⊕ Mouse ⊕ Rat ⊕
This gene list contains 90 genes for the study of blood pressure regulation and 6 reference genes to be used for normalization. Hypertension is a common disorder and is a.... show more

Application:	-
Species:	Human, Mouse, Rat
Genes in panel:	96, 96, 96
% Match:	100%, 100%, 100%
Panel type:	Made to order

How to Upload a Gene List and Compare it to Panel Content

① Download the Excel template, fill it out, and upload it OR enter the gene name(s)

Download the Excel template, fill it out, and upload it OR enter the gene name(s) separated by a comma in the 'Search by Gene List' box. In this example, we'll show you how to enter genes in the 'Search By Gene List' box and then compare them to the gene content across multiple panels.

By application
Neuroscience
Oncology
Immunology

By pathway
A1 Astrocyte
A2 Astrocyte
Activated B-cells
View all >

By biological process
actin cytoskeleton organization
actin cytoskeleton reorganization
actin filament bundle assembly
View all >

Search By Gene List

Download template   ⬆ Upload list

Enter gene symbols, separated by commas

② Enter your genes of interest separated by a comma and click 'Search Panels'

By application
Neuroscience
Oncology
Immunology

By pathway
A1 Astrocyte
A2 Astrocyte
Activated B-cells
View all >

By biological process
actin cytoskeleton organization
actin cytoskeleton reorganization
actin filament bundle assembly
View all >

Search By Gene List

Download template   ⬆ Upload list

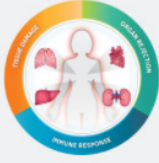CCL2, CST3, CXCL10, CXCL9, FABP1, HAVCR2, IGBP7, TIMP2

Values entered: 8

Search Panels

3   Browse through the list of panels to see the percentage overlap

4   Compare multiple panels to the list of genes

To compare multiple panels to the list of genes, click on the 'Human' or 'Mouse' icon beneath each panel signifying the human or mouse version of the panel and then click on compare. Please note that it is not possible in the Panel Pro tool to compare human panels to mouse panels or rat panels and vice versa.

⑤ View the overlap with multiple panels

View the overlap with multiple panels in a summary table or in a graph, by gene count, or by percentage overlap. .
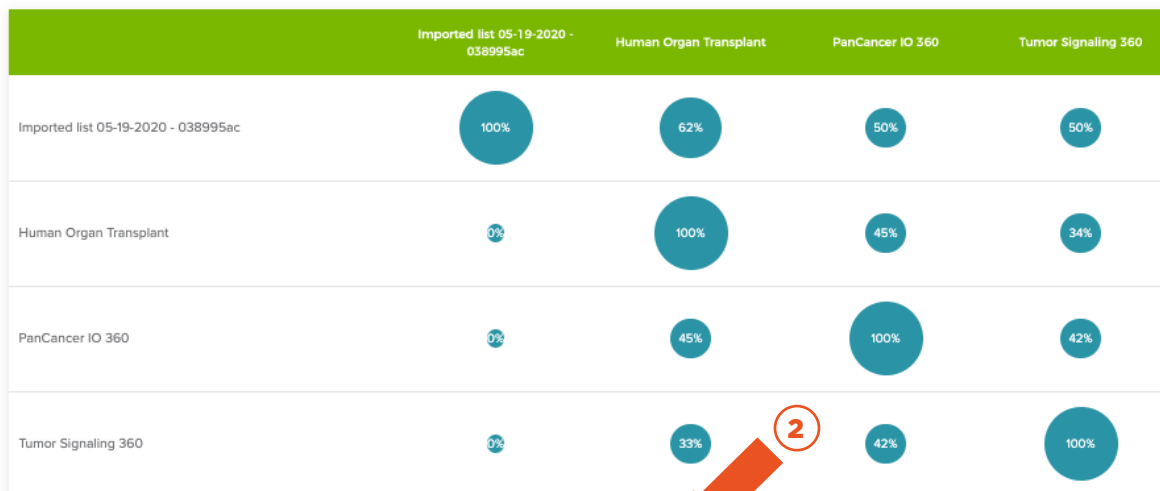
Overview

[Download]

Panel	# of Genes	Species	Application	Annotations
Imported list 05-19-2020 - 038995ac	8		-	89
Human Organ Transplant	770	Human	Immunology	38
PanCancer IO 360	770	Human	Oncology	24
Tumor Signaling 360	780	Human	Oncology	49

Gene Overlap Summary Show : **Graph** Gene Count % Overlap ①

	Imported list 05-19-2020 - 038995ac	Human Organ Transplant	PanCancer IO 360	Tumor Signaling 360
Imported list 05-19-2020 - 038995ac	100%	62%	50%	50%
Human Organ Transplant	0%	100%	45%	34%
PanCancer IO 360	0%	45%	100%	42%
Tumor Signaling 360	0%	33%	42%	100%

Gene Overlap Summary Show : Graph **Gene Count** % Overlap ②

	Imported list 05-19-2020 - 038995ac	Human Organ Transplant	PanCancer IO 360	Tumor Signaling 360
Imported list 05-19-2020 - 038995ac	8	5	4	4
Human Organ Transplant	5	770	354	265
PanCancer IO 360	4	354	770	328
Tumor Signaling 360	4	265		780

Gene Overlap Summary Show : Graph Gene Count **% Overlap** ③

	Imported list 05-19-2020 - 038995ac	Human Organ Transplant	PanCancer IO 360	Tumor Signaling 360
Imported list 05-19-2020 - 038995ac	100	62	50	50
Human Organ Transplant	0	100	45	34
PanCancer IO 360	0	45	100	42
Tumor Signaling 360	0	33	42	100

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6 **You can also view the overlap as a table with all the gene names as well as the annotations**

Gene Overlap

Show : **common between panel first**   alphabetical order

Gene Symbol	Imported list 05-19-2020 - 038995ac	Human Organ Transplant	PanCancer IO 360	Tumor Signaling 360
CCL2	✔	✔	✔	✔
CXCL10	✔	✔	✔	✔
CXCL9	✔	✔	✔	✔
HAVCR2	✔	✔	✔	✔
IL10		✔	✔	✔
TBX21		✔	✔	✔
JAK3		✔	✔	✔
CCR5		✔	✔	✔

Annotation Coverage

Annotation	Imported list 05-19-2020 - 038995ac	Human Organ Transplant	PanCancer IO 360	Tumor Signaling 360
Activated Microglia	1	0	0	0
Activation	4	0	0	0
Adaptive	3	0	0	0

**7** **Click on the 'Download' button to view the overlap report**

Click on the 'Download' button to view the overlap report as an Excel file with separate tabs for a gene view, annotation view, and a summary view.

Overview

Download

Panel	# of Genes	Species	Application	Annotations
Imported list 05-19-2020 - 038995ac	8		-	89
Human Organ Transplant	770	Human	Immunology	38
PanCancer IO 360	770	Human	Oncology	24
Tumor Signaling 360	780	Human	Oncology	49

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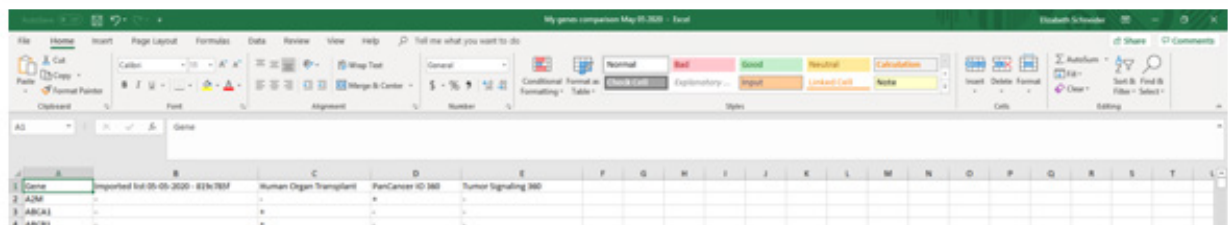
How to Compare Panels to One Another

① **Enter in the names of the panels in the 'Compare Panels' box and click on 'Compare'**

Compare Panels

Autoimmune Profiling

Human Organ Transplant

Fibrosis V2

Autoimmune Profiling

(Human)

(Human)

(Human)

×

×

×

Compare

② **View the overlap in a summary table or in a graph, by gene count, or by percentage overlap**

Overview

Download

Panel	# of Genes	Species	Application	Annotations
Human Organ Transplant	770	Human	Immunology	38
Fibrosis V2	770	Human	Immunology , Oncology	51
Autoimmune Profiling	770	Human	Immunology	34

Gene Overlap Summary

Show : Graph Gene Count % Overlap

	Human Organ Transplant	Fibrosis V2	Autoimmune Profiling
Human Organ Transplant	100%	30%	48%
Fibrosis V2	30%	100%	31%
Autoimmune Profiling	48%	31%	100%

(2)   View the overlap in a summary (continued)

Gene Overlap Summary

Show :   Graph   Gene Count   % Overlap

	Human Organ Transplant	Fibrosis V2	Autoimmune Profiling
Human Organ Transplant	770	235	375
Fibrosis V2	235	770	244
Autoimmune Profiling	375	244	770

Gene Overlap Summary

Show :   Graph   Gene Count   % Overlap

	Human Organ Transplant	Fibrosis V2	Autoimmune Profiling
Human Organ Transplant	100	30	48
Fibrosis V2	30	100	31
Autoimmune Profiling	48	31	100

(3)   You can also view the overlap as a table with all the gene names as well as the annotations

Gene Overlap

Show :   common between panel first   alphabetical order

Gene Symbol	Human Organ Transplant	Fibrosis V2	Autoimmune Profiling
IRF1	✔	✔	✔
PTGS2	✔	✔	✔
THBS1	✔	✔	✔
MYD88	✔	✔	✔
HIF1A	✔	✔	✔
IFI27	✔	✔	✔
XBP1	✔	✔	✔
CD34	✔	✔	✔

Annotation Coverage

Annotation	Human Organ Transplant	Fibrosis V2	Autoimmune Profiling
Adaptive Immune System	127	0	0
Adenosine Pathway	0	51	0
Angiogenesis	22	37	0

4 Click on the 'Download' button to view the overlap report

Click on the 'Download' button to view the overlap report as an Excel file with separate tabs for a gene view, annotation view, and a summary view.

For more information, please visit nanostring.com