



ImmPort Gene Lists

ImmPort Gene Lists provide detailed information about immunologically relevant genes categorized by type (e.g. Interleukins), pathway (e.g. Antigen Processing and Presentation) or differential expression in immune processes (e.g. Centroblast vs. Naïve B Cells). These lists of genes are derived from manual curation of publically available data from a variety of resources and analysis of expression data from the NCBI Gene Expression Omnibus (GEO).

The ImmPort Gene List types include:

1. Immune-Related Genes by Type and/or Pathway

- Lists generated via initial database queries and literature searches followed by manual curation.
- Genes are grouped and presented by their immunological function, pathways involved, etc.

2. Differentially Expressed Genes in Immune Processes

- Generated from analysis of selected immunologically relevant, publically available microarray data
- An optimized data analysis pipeline is applied, including background correction, normalization, summarization and significant gene selection
- Data are analyzed as pair-wise comparisons of biologically interesting experimental groups



Access to the ImmPort Gene Lists

The screenshot shows the ImmPort website interface. At the top, there is a navigation bar with links for 'About ImmPort', 'Access Data', 'Tools', 'Resources', and 'News & Events'. The 'Access Data' menu is open, showing options like 'Submit Data', 'Submission History', 'Research Data', 'Reference Data', and 'Reference Advanced Search'. A sub-menu for 'Reference Data' is also visible, listing 'ImmPort Gene Lists', 'Download Comprehensive List of Immune-Related Genes', and 'Reference Data History'. Below the navigation bar, there is a 'What You Can Do' section with tabs for 'Search Data', 'Visualize Data', and 'Analyze Data'. Under 'Search Data', there are links for 'Genes', 'MHC Alleles', 'SNPs', and 'ImmPort Gene Lists'. A blue callout box points to the 'ImmPort Gene Lists' link in the 'What You Can Do' section and the 'ImmPort Gene Lists' option in the 'Reference Data' sub-menu.

There are two ways to access the ImmPort Gene Lists:

- 1) From "Access Data" select "Reference Data" then click on "ImmPort Gene Lists"
- 2) Click on the "ImmPort Gene Lists" link in the "What You Can Do" section



Access to ImmPort Gene Lists

To browse or search ImmPort's Comprehensive List of Immune-Related Genes, click [here](#)

Access to ImmPort's
Comprehensive List of
Immune-Related Genes

Immune-Related Genes by Type and/or Pathway

- ▶ Compiled by systematic searches of Entrez Gene, UniProt, KEGG and various literature sources
- ▶ Manually reviewed, edited and categorized (last update May 2009)

Differentially Expressed Genes in Immune Processes

- ▶ Derived by analysis of selected Immunologically relevant microarray gene expression datasets from the [NCBI Gene Expression Omnibus \(GEO\)](#) repository.
- ▶ Analyzed using the [ImmPort Optimized Data Analysis Pipeline](#), including background correction, normalization, summarization and significant gene selection, as well as ontology analysis of significant genes.

Cytokines

[Interleukins](#)
[Interferons](#)
[TNF Family Members](#)
[TGF- \$\beta\$ Family Members](#)

Chemokines

Cytokine Receptors

[Interleukin Receptor](#)
[Interferon Receptors](#)
[TNF Family Member Receptors](#)
[TGF- \$\beta\$ Family Member Receptors](#)
[Chemokine Receptors](#)

TCR Signaling Pathway

BCR Signaling Pathway

Natural Killer Cell Cytotoxicity

Antigen Processing and Presentation

Antimicrobials

B Cell Stimulation

[CD40L vs. Control](#)
[Anti-IgM vs. Control](#)
[CD40L and Anti-IgM vs. Control](#)

B Cell Development

[Memory vs. Naive](#)
[Centroblast vs. Naive](#)
[Centrocyte vs. Naive](#)
[Centrocyte vs. Memory](#)

ImmPort Gene Lists
Categorized by Type
and/or Pathway

ImmPort Gene Lists
Categorized by
Differential Expression in
Immune Processes



Access to ImmPort Gene Lists

Reference Data / ImmPort Gene Lists

Home | Genes | Proteins | MHC Alleles | Pathways | Protein Networks | SNPs | **ImmPort Gene Lists** | Data History

ImmPort Gene Lists offer curated reports of immunologically important genes

- ▶ Pathway Analysis
- ▶ Listings of Protein-Protein Interactions
- ▶ Gene Ontology Associations
- ▶ ... in the ImmPort Gene D

ImmPort ... (TCR Signaling Pathway)

To browse ... of Immune-Related

Genes, click [here](#)

Immune-Related Genes by Type and/or Pathway

- ▶ Compile ... systematic searches of Entrez Gene, UniProt, KEGG and various literature sources
- ▶ Manually reviewed, edited and categorized (last update May 2009)

Immune-Related Genes by Type and/or Pathway

- Cytokines
 - [Interleukins](#)
 - [Interferons](#)
 - [TNF Family Members](#)
 - [TGF-β Family Members](#)
 - [Chemokines](#)
- Cytokine Receptors
 - [Interleukin Receptor](#)
 - [Interferon Receptors](#)
 - [TNF Family Member Receptors](#)
 - [TGF-β Family Member Receptors](#)
 - [Chemokine Receptors](#)
- TCR Signaling Pathway
- BCR Signaling Pathway
- Natural Killer Cell Cytotoxicity
- Antigen Processing and Presentation
- Antimicrobials
- Comprehensive List of Immune-Related Genes

Differentially Expressed Genes in Immune Processes

- B Cell Stimulation
 - [CD40L vs Control](#)
 - [Anti-IgM vs. Control](#)
 - [CD40L and Anti-IgM vs. Control](#)
- B Cell Development
 - [Memory vs. Naive](#)
 - [Centroblast vs. Naive](#)
 - [Centrocyte vs. Naive](#)
 - [Centrocyte vs. Memory](#)

Review and/or download a gene list report by clicking on the link in the drop-down menu or the list below

[CD40L and Anti-IgM vs. Control](#)

[Memory vs. Naive](#)



Summary, Gene Ontology, Pathway and Protein Interaction Data for Genes in the Immune-Related Genes by Type and/or Pathway Lists

Click on any of the links at the top of the table to view specific information about genes in the selected list

Click on "[Excel]" to download a spreadsheet containing the information under the indicated tab

Click on "Protocol" to download documentation about how the Gene List was generated

Click on the ID for any of the genes in the list to view the ImmPort Gene Detail Page for that gene

Resources | **Neuro**

Home | Genes | Proteins | MHC | Pathways | Protein Networks | SNPs | ImmPort Gene Lists | Data History

Cytokines

Gene Summary [Excel] | Gene Ontology [Excel]

Pathways: [Browse By Pathway](#) [Browse by Gene](#) | Protein Interactions | Protocol

ID	Symbol	Name	Synonyms	Chr
9370	ADIPOQ	adiponectin, C1Q and collagen domain containing	ACDC, ACRP30, ADIPQTL1, ADPN, APM-1, APM1, GBP28, adiponectin	3
133	ADM	adrenomedullin	AM	11
79924	ADM2	adrenomedullin 2	AM2, FLJ21135, dJ579N16.4	22
181	AGRP	agouti related protein homolog (mouse)	AGRT, ART, ASIP2, MGC118963	16
183	AGT	angiotensinogen (serpin peptidase inhibitor, clade A, member 8)	ANHU, FLJ92595, FLJ97926, SERPINA8	1
258	AMBN	ameloblastin (enamel matrix protein)	-	4
265	AMELX	amelogenin, amelogenesis imperfecta 1, X-linked)	AIH1, ALGN, AMG, AMGL, AMGX	X
268	AMH	anti-Müllerian hormone	MIF, MIS	19
253935	ANGPTL5	angiopoietin-like protein 5	-	11
10218	ANGPTL7	angiopoietin-like protein 7	AngX, CDT6, RP4-647M16.2, dJ647M16.1	1
8862	APLN	apelin	XNPEP2	X
374	AREG	amphiregulin	AR, CRDGF, MGC13647, SDGF	4
7873	ARMET	arginine methyltransferase	ARP, MANF, MGC142148, MGC142150	3



Summary, Ontology Analysis and Experimental and Analytical Metadata for Genes in the Differentially Expressed Genes in Immune Processes Lists

Click on “Experiment Metadata” for a description of the experiment under analysis

Click on “Statistically Significant Genes” for a summary report of the genes found to be differentially expressed under the analyzed conditions

Click on “Pipeline Analysis Summary” for details on the methods used to analyze the microarray data

Click on “Ontology Analysis of Significant Genes” to view gene ontology analysis results

Click on “Download Report” to download the list and all associated data and metadata

Click on the ID for any of the genes in the list to view the ImmPort Gene Detail Page for that gene

CD40L vs. Control
Download Report

Experiment MetaData | Pipeline Analysis Summary
Statistically Significant Genes | Ontology Analysis of Significant Genes

Statistically Significant Genes
Annotation File: Custom CDF V7: Hs95Av2 Hs REFSEQ 7 - University of Michigan
Fold change was calculated as the ratio of the average expression value of CD40L treated samples over control samples.

Gene ID	Symbol	Name	Synonyms	Chr	Fold Change	p Value	Cluster Id
4082	MARCKS	myristoylated protein kinase C substrate 1			3.702	9.91E-07	1
1880	GPR103	G protein-coupled receptor 103			3.178	7.57E-09	1
22797	TFEC	transcription factor EC	bHLHe34		2.982	1.54E-05	1
NM_001018058	TFEC	transcription factor EC	TCFEC, TFEC, bHLHe34	7	2.982	1.54E-05	1
NM_000433	NCF2	neutrophil cytosolic factor 2	FLJ93058, NCF-2, NOXA2, P67-PHOX, P67PHOX	1	2.739	3.81E-05	1



ImmPort Gene Detail Page for Genes of Interest from the ImmPort Gene Lists

[Back To Search Results](#)

ADIPOQ

Collapse All: Expand All:

Gene Summary

Entrez Gene ID	9370	UniGene ID	Hs_80485
Entrez Gene Symbol	ADIPOQ	Entrez Gene Name	adiponectin, C1Q and collagen domain containing
Also known as	ACDC; ACRP30; ADIPQTL1; ADPN; APM-1; APM1; GBP28; adiponectin	Organism (Taxon ID)	Homo sapiens (9606)
Chromosome Location	3q27	Genome Build	Build 36.1, hg18
Gene Expression	GEO		

Transcripts

[\[Click Here to View Reference Sequence Details\]](#)

Protein

Gene Ontology [Ontology Browser]

Protein Interactions

Pathways

Phenotypes and Diseases

Polymorphism

Homologs

Related Sequences

References

Export

Export the file for further analysis

Expand the blocks to view detailed information