

## NCBI Gene Guidelines

### URL

<https://www.ncbi.nlm.nih.gov/gene>

### Description

Gene integrates information from a wide range of species. A record may include nomenclature, Reference Sequences (RefSeqs), maps, pathways, variations, phenotypes, and links to genome-, phenotype-, and locus-specific resources worldwide.

### Guidelines

NCBI Gene is a database that provides information and resources on genes and the different entities associated with them. For the purposes of this guideline, you will be searching for information on the TGFB-Induced Factor Homeobox 1 gene (TGIF1) in the mouse.

On the homepage, you will see a search bar at the top of the screen with a drop-down menu to the left and a link titled “Advanced” directly below. You are going to click on the “Advanced” link, which will take you to the “Advanced Search” page.

#### Gene Advanced Search Builder

 Showing Current items.

Use the builder below to create your search

[Edit](#) [Clear](#)

**Builder**

All Fields  [Show index list](#)

AND All Fields  [Show index list](#)

or [Add to history](#)

Use the search bars under the “Builder” section to search for this gene. Under “All Fields”, select “Gene Name” and then type “TGIF1” in the search bar to the right. The search bar at the very top should automatically populate with the information that you input in the Builder.

#### Gene Advanced Search Builder

 Showing Current items.

TGIF[Gene Name]

[Edit](#) [Clear](#)

**Builder**

Gene Name  [Show index list](#)

AND All Fields  [Show index list](#)

or [Add to history](#)

Since the paper indicated that the experimental model was a mouse, you will want to limit your search to that specific organism. Be sure that the Boolean Operator field is set to “AND” and in

the second “All Fields” drop-down menu, select “Organism”. In the search bar to the right of that drop-down menu, type “mouse”.

When you have done this, select the brown “Search” button.

Since this example is so specific, NCBI Gene directed us to the record for the mouse version of this gene. If your query is more general, you will be directed to a list of results from which you will pick the record that best fits the one described in your paper.

This page is dedicated to the record for TGF $\beta$ -induced factor homeobox 1 in the house mouse. Contained herein you will find: basic gene information (including its unique identifier), a map of the gene, associated pathways, and a list of associated genomic sequences. You will find helpful information in these section when annotating your BioModel

### Genomic Regions, Transcripts, and Products

This section contains the gene’s exact loci in the mouse genome. If your BioModel calls for annotation of this type of information, then take a look at the “Genomic Sequence” drop-down menu. This contains all of gene’s nucleotide sequences records. It’s recommended that you only view this section if you are searching for more information on the gene and its transcripts, or if you need a visual on its chromosomal location.

### Pathways from BioSystems

Pathways associated with this gene are located in this section. Each entry is hyperlinked to its respective record in Reactome or KEGG. If any of these pathways are associated with your BioModel, you can click on it and it will take you to that record where you may retrieve its unique identifier.

### General Protein Information

This is where you will find information on preferred names of proteins produced by this gene.

### NCBI Reference Sequences (RefSeq)

The RefSeq section provides annotations of genomic sequences associated with this gene. Proteins in these records could be of interest to you annotation endeavors as they are usually cross-referenced with other databases such as UniProtKB.