

How do I find the MGI allele ID for the mutant allele I want to submit?

Mouse Genome Informatics (MGI) <http://www.informatics.jax.org/> strives to provide a complete description of every mutant allele that has been published, including an ID number and official symbol that uniquely identify that allele.

This description can be found on an MGI page called the **Allele Detail** page. It contains a wealth of information about the allele, including the ID number that you need to complete the submission of the allele to the UCSF mouse inventory database.

Allele Detail

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?

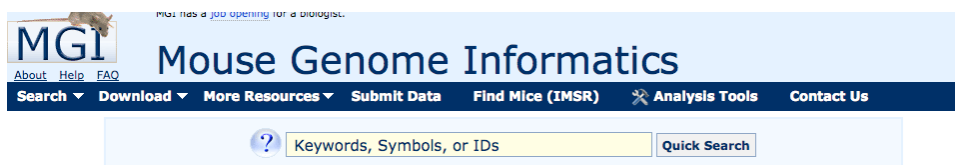
Ascl1^{tm1And}

Targeted Allele Detail

| | | |
|--|------------------------|--|
| Nomenclature Mutation origin Mutation description Find Mice (IMSR) Expression Phenotype summary Phenotypes | | |
| Nomenclature | Symbol: | Ascl1 ^{tm1And} |
| | Name: | achaete-scute complex homolog 1 (Drosophila); targeted mutation 1, David J Anderson |
| | MGI ID: | MGI:1857470 |
| | Synonyms: | Mash-1-, Mash-1 ^{delta} , Mash1- |
| | Gene: | Ascl1 Location: Chr10:86953564-86956405 bp, - strand Genetic Position: Chr10, Syntenic |
| Mutation origin | Germline Transmission: | Earliest citation of germline transmission: J:15850 |
| | Parent Cell Line: | Other (see notes) (ES Cell) |
| | Strain of Origin: | 129 |
| Mutation description | Allele Type: | Targeted (knock-out) |
| | Mutations: | Insertion, Intragenic deletion |
| A PGK-neomycin resistance cassette replaced the entire coding region, 0.6 kb of sequence 5' of the translation initiation codon, and | | |

There are two simple methods for finding the **Allele Detail page**, starting with **(1)** the name of the gene that is modified or **(2)** the Pubmed ID (PMID) of a paper in which the allele is described.

- (1) Use the “Quick Search” feature on the MGI home page (illustrated below) and at the top right on every other MGI page:



The screenshot shows the MGI Mouse Genome Informatics homepage. At the top, there is a navigation bar with links: About, Help, FAQ, Home, Genes, Phenotypes, Expression, and Recombinases. Below this is a secondary navigation bar with links: Search, Download, More Resources, Submit Data, Find Mice (IMSR), Analysis Tools, and Contact Us. The main content area features a large search box with a question mark icon and the text "Keywords, Symbols, or IDs". To the right of the search box is a "Quick Search" button.

Enter the symbol for the gene that is modified (outdated symbols usually work).

Note: if there are a great many mutant alleles for a particular gene (e.g., “Rosa26”), you may want to find the MGI detail page using method #2 (see below), which starts with the PMID.

Scroll through the query results and find the one for the mutant allele you wish to submit to the Inventory.

Here, "Mash1" (an outdated symbol for *Ascl1*) was entered.

Quick Search Results for: Mash1

Examples: embryo* develop* NM_013627 MGI:97490 Fas<|pr> Pax* i

See [details](#) for this search.

| Score | Type | Symbol | Name | Chr | Location | Str |
|-------|---------------------|--|---|-----|-------------------|-----|
| ★★★★ | protein coding gene | <i>Ascl1</i> | achaete-scute complex homolog 1 (Drosophila) | 10 | 86953564-86956405 | - |
| ★★★ | Targeted allele | <i>Ascl1^{tm1And}</i> | achaete-scute complex homolog 1 (Drosophila); targeted mutation 1, David J Anderson | 10 | 86953564-86956405 | - |
| ★★★ | Targeted allele | <i>Ascl1^{tm1(Neurog2)Fgu}</i> | achaete-scute complex homolog 1 (Drosophila); targeted mutation 1, Francois Guillemot | 10 | 86953564-86956405 | - |
| ★★★ | Targeted allele | <i>Ascl1^{tm1Cbm}</i> | achaete-scute complex homolog 1 (Drosophila); targeted mutation | 10 | 86953564-86956405 | - |

A summary of official symbols for the gene itself and all mutant alleles of it (as well as transgenes that include this gene) will come up. Scroll through and find the mutant allele you want to submit to the Inventory.

Finding the correct one usually requires knowledge of where the allele was made: the official symbol includes a lab code that usually represents the name of the person in whose lab it was produced.

Note that the letters "tm" in the superscript stand for "targeted mutation."

(In the example shown, the mutant allele was produced in David Anderson's lab, and the lab code is And). There are exceptions to this. For example, "Unc" (University of North Carolina) is the lab code for mutant alleles generated by Oliver Smithies' lab.

Click on the correct allele symbol, for a link to the **Allele Detail** page that describes it.

In making a choice, be especially careful if there are several mutant alleles from the same source.

Make sure you have chosen the correct one by looking at the description of the allele on the detail page. Then, copy the MGI ID (number only) provided in the Nomenclature field at the top of the page to the database submission form.

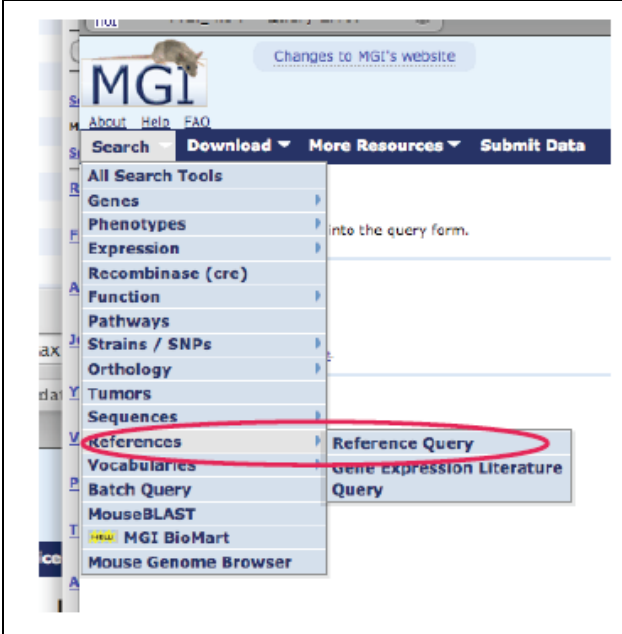


Ascl1^{tm1And}

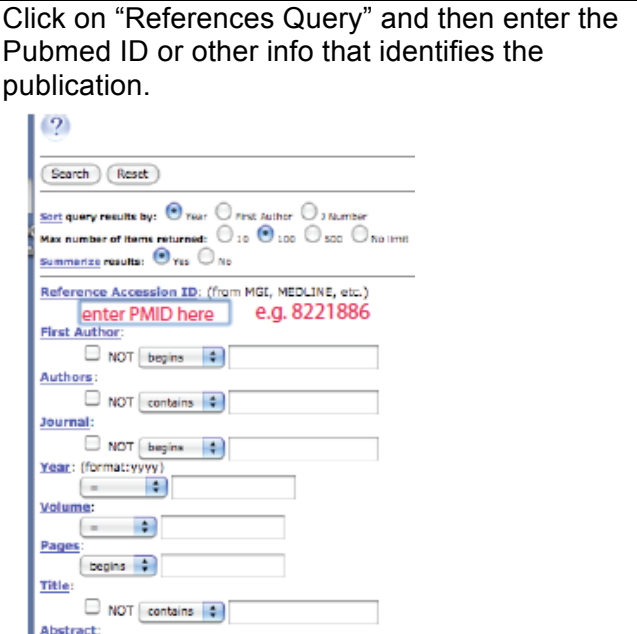
Targeted Allele Detail

| Nomenclature Mutation origin Mutation description Find Mice (IMSR) Expression Phenotype summary Phenotypes by ger | |
|---|--|
| Nomenclature | <p>Symbol: <i>Ascl1^{tm1And}</i></p> <p>Name: achaete-scute complex homolog 1 (Drosophila); targeted mutation 1, David J Anderson</p> <p>MGI ID: MGI:1857470</p> <p>Synonyms: Mash-1-, Mash-1^{delta}, Mash1-</p> <p>Gene: <i>Ascl1</i> Location: Chr10:86953564-86956405 bp, - strand Genetic Position: Chr10, Syntenic</p> |
| Mutation origin | <p>Germline Transmission: Earliest citation of germline transmission: J:15850</p> <p>Parent Cell Line: Other (see notes) (ES Cell)</p> <p>Strain of Origin: 129</p> |
| Mutation description | <p>Allele Type: Targeted (knock-out)</p> <p>Mutations: Insertion, Intragenic deletion</p> <p>A PGK-neomycin resistance cassette replaced the entire coding region, 0.6 kb of sequence 5' of the translation initiation codon, and 0.2</p> |

(2) Go to “**References**,” one of the choices under “search” on the left side of the MGI home page:



Click on “References Query” and then enter the Pubmed ID or other info that identifies the publication.



This will bring up a page with a link to the publication (if you start with a PMID there will be only one choice).

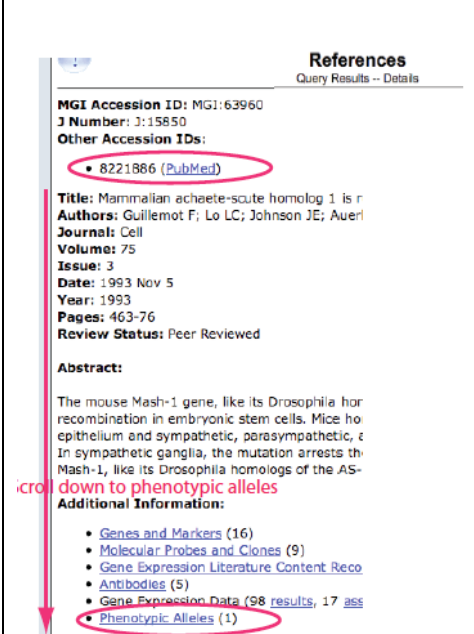


1 matching item displayed

[J:15850](#), Guillemot F; Lo LC; Johnson JE; Auerbach A; Anderson DJ; Joyner AL, Mammalian achaete-scute homolog 1 is required for the early c... 5;75(3):463-76

Click on that link, and you will get a page describing the paper, as well as a link – at the bottom of the page – to “Phenotypic alleles.”

Click on the “phenotypic alleles” link, which will take you to a page listing all the mutant alleles and transgenes described in **that** paper.



References
Query Results -- Details

MGI Accession ID: MGI:63960
J Number: J:15850
Other Accession IDs:

- [8221886 \(PubMed\)](#)

Title: Mammalian achaete-scute homolog 1 is r
Authors: Guillemot F; Lo LC; Johnson JE; Auer
Journal: Cell
Volume: 75
Issue: 3
Date: 1993 Nov 5
Year: 1993
Pages: 463-76
Review Status: Peer Reviewed

Abstract:

The mouse Mash-1 gene, like its Drosophila hom recombination in embryonic stem cells. Mice ho epithelium and sympathetic, parasympathetic, c In sympathetic ganglia, the mutation arrests th Mash-1, like its Drosophila homologs of the AS-

Additional Information:

- [Genes and Markers \(16\)](#)
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- [Gene Expression Literature Content Reco](#)
- [Antibodies \(5\)](#)
- [Gene Expression Data \(98 results, 17 ass](#)
- [Phenotypic Alleles \(1\)](#)

Scroll through and find the one for the mutant allele you wish to submit to the Inventory.



| Reference | J:15850 Guillemot F et al., "Mammalian aphae |
|---|---|
| 1 matching Allele (1 Gene/Marker represented) | |
| Allele Symbol Gene; Allele Name | Chr Synonyms |
| Ascl1^{tm1And} achaete-scute complex homolog 1 (Drosophila); targeted mutation 1, David J Anderson | 10 Mash-1 ⁻ , Mash-1 ^{delta} , Mash1- |

As noted above, finding the correct mutant allele usually requires knowledge of where it was made: the official symbol includes a lab code (at the end of the symbol) that usually represents the name of the person in whose lab the allele was produced.

(The example shown is for a mutant allele produced in David Anderson's lab, for which the lab code is And).

Click on the correct allele symbol, for a link to the **MGI Allele Detail** page that describes the allele.



Ascl1^{tm1And}

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Although MGI strives to have a detail page for every mutant allele that is published, they do not always have one.

If you cannot find a detail page for the mutant allele you have using either method, enter "none" in the field where the MGI allele ID is requested, then enter the MGI ID for the gene that is mutated in the allele you want to submit and the PMID for a publication in which the mutant allele is described.

Database admin will contact MGI and ask them to post a detail page. Your submission will be converted to a record after the detail page is posted