



Links from dbSNP Reports to Other Online Data Resources

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Can you explain the different types of Linkouts available in dbSNP?

Currently, there are two kinds of LinkOuts available on the dbSNP site:

- **NCBI LinkOut:** is established when a submitter contacts the NCBI LinkOut group and provides them with links back to the submitter. For example, Applied Biosystems has provided many links between dbSNP refSNPs and Applied Biosystems probes using NCBI LINKOUTs. This particular example shows a single linkout, but one SNP can have multiple linkouts.
- **dbSNP Linkout:** is established when a submitter provides a contact URL in their submission that provides additional information about the submitted SNP. A submitter may only submit a single linkout_url per submission. This url goes to the submitter's primary website, and if the submitter has additional links for the ss, they can be accessed there.

(11/30/07)

Links to SNP3D Structure Mapping

Am I correct in interpreting the "yes" in a cluster report's "3D" column in to mean that there is a 3D structure available that includes the mutation produced by that particular SNP?

The actual structure of the mutant protein does not exist. The protein containing the variations in dbSNP are mapped to neighboring proteins in the PDB database using blast analysis as described in the "Links to SNP3D Structure Mapping" section of this archive.

To view the related/neighbor structures with the variant positions labeled using an example — MAOB — go to the [NCBI Related Structures Search](#) and place your mouse on the first pink graphical sequence (1GOS-A) to see a mouse-over summary, or click it for more detail. When you get to the [detail](#) page, you can click on the "View Structure and alignment in Cn3D" button located just beneath Alignment to query sequence, to view the structure. (07/25/08)

In the refSNP report for rs5273, there is a link to 3D structure mapping which shows the interconnection between the SNP, the protein sequence, and structure — how is this information generated?

Take a look at the 3D structure neighbor analysis [appendix](#) and the "SNP Position in 3D Structure" subsection (in the Functional Analysis section) in the dbSNP Handbook. (5/10/07)

Does dbSNP have a data file that cross-references refSNP ID numbers (rsID) and protein structure?

The SNP structure information is stored in the dbSNP FTP site [SNP3D table](#).

1. You can find the schema for this table by going to the [dbSNP database dictionary](#):

2. Select the radio buttons marked “Table Name”, and “contains”,
3. Type the text “3D” (without the quotation marks) into the text search box.
4. Click the Search button.
5. The resulting screen will show you the text “SNP3D”. Click on this text to see the schema for this table. (4/30/07)

Links to OMIM

How does dbSNP create the links between the OMIM accessions and the SNPs? Do the OMIM disorders derive directly from the SNPs?

The links were computed using the co-location of the SNP and the OMIM variation positions on a gene; there is no assertion about the affect of the SNP on the disorder. (3/22/05)

In build 121, gene id 5621 contained rs1799990 and rs1800014, each of which had links to OMIM. These SNPs and their OMIM links do not appear in build 122. What happened to them?

The mapping of these SNPs or the gene model has changed between builds.

The report for rs3203210 contains a link for 3D structure mapping, whereas the report for rs1062049 does not, although both are connected by the same protein accession. Why is this?

rs1062049 encodes a T to I amino acid change at position 21 of the MASP1 protein, which does not align with the structure at this position. MASP1 aligns with Chain A in the crystal structure of the cub1-egf-cub2 region of MASP2, starting at position 27. You can [view the alignment](#).

Does dbSNP curate phenotypic information to include in its reports?

dbSNP does not curate phenotypic information, but we hope to include some in the future. We do have some SNPs mapped to allelic variants in the Online Mendelian Inheritance in Man (OMIM) database.

Links to GenBank

What is the relationship between dbSNP and GenBank?

dbSNP is an independent database and is not a division of [GenBank](#). Sequences contained within dbSNP records are contained within the sequences of one or more GenBank records, with the GenBank records generally containing longer sequences and fewer allele designations. A [diagrammatic model](#) of the relationship between dbSNP and other NCBI databases can be found online. (04/05/06)

Is dbSNP cross-referenced with any other databases besides GenBank and HGVbase?

We have links to other NCBI databases, such as Taxonomy, Gene, OMIM, PubMed, and Structure.

Links to TaqMan Assays

Is it possible to download a file that identifies which dbSNP records have corresponding TaqMan assays available via the LinkOut mechanism?

1. Go to NCBI's [LinkOut home page](#).
2. Scroll down the alphabetized list of non-bibliographic LinkOut providers until you come to the following entry:
TaqMan(r) probe and primer sets from Applied Biosystems (AB)

3. Click on the “SNP” link located to the right of the provider name to access all 4.3 million SNPs.
(3/15/07)