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## Genome assembly and annotation V1.2

If you use this data, please cite: Lang, D., A.D. Zimmer, S.A. Rensing, R. Reski (2008): Exploring plant biodiversity: the Physcomitrella genome and beyond. Trends in Plant Science 13, 542-549.

### [V1.2.1 filtered assembly](#)

1,985 [filtered](#) genomic scaffolds based on the V1.0 JGI assembly.

### [V1.2.2 filtered gene model transcripts](#)

27,960 [filtered](#), [annotated](#) transcripts based on the V1.1 JGI gene model selections.

### [V1.2.2 filtered gene model proteins](#)

27,960 [filtered](#), [annotated](#) proteins based on the V1.1 JGI gene model selections.

### [V1.2.2 GFF3](#)

27,960 [filtered](#) gene structures in [GFF3 format](#).

[Dbxrefs V1.2](#): database cross references to NCBI Genbank and NCBI Gene

*Files are compressed with gzip. Sequences are provided as FASTA format.*

# Downloads genome annotation version 1.6

Please cite the following paper if you use the V1.6 genome annotation for your work:

Zimmer, A.D., D. Lang, K. Buchta, S. Rombauts, T. Nishiyama, M. Hasebe, Y. van de Peer, S.A. Rensing, R. Reski (2013): Reannotation and extended community resources of the non-seed plant *Physcomitrella patens* provide insights into the evolution of plant gene structures and functions. [BMC Genomics 14, 498](#).

In addition, if you use any of the released files please provide this site and the release as a reference:

current: V1.6 2012.3 <https://www.cosmoss.org>[https://www.cosmoss.org/physcome\\_project/wiki/Downloads](https://www.cosmoss.org/physcome_project/wiki/Downloads)

## Gene structure annotation

### GFF3

#### V1.6 protein coding GFF3

32,275 gene structures of 38,357 protein coding transcripts in GFF3 format.

#### V1.6 non-protein coding GFF3

non-protein coding genes/regions (798 rRNA, 432 tRNA, 229 miRNA, 213 snRNA, 6 SRP) in GFF3 format.

### FASTA

- [38,357 mRNA transcript sequences](#)
- [38357 protein sequences](#)
- [18180 5'UTR sequences](#)
- [38357 CDS sequences](#)
- [19,041 3'UTR sequences](#)

## Functional annotation - genonaut dumps

The community-curated genonaut annotation (descriptions, gene names, protein names, GO) is dumped regularly and available as release and master branch in a bitbucket repository. The master branch will soon be configured to reflect nightly dumps.

### Latest Release 2012.3

#### [cosmoss.genonaut.gene\\_name.txt](#)

gene name tab-delimited table (including annotator information)

#### [cosmoss.genonaut.protein\\_name.txt](#)

protein name tab-delimited table (including annotator information)

#### [cosmoss.genonaut.aliases.txt](#)

## Downloads

[gene aliases tab-delimited table \(including annotator information\)](#)  
[cosmoss.genonaut.description.txt](#)  
description lines tab-delimited table (including annotator information)  
[cosmoss.genonaut.annot](#)  
Transcript/Protein-wise GO annotation in [BLAST2GO](#) annotation format  
[cosmoss.genonaut.gaf2](#)  
Transcript/Protein-wise GO annotation in GO Annotation File Format 2.0 ([GAF2.0](#))  
[cosmoss.genonaut.map](#)  
Locus-wise GO annotation in [topGO](#) input format  
[cosmoss.genonaut.txt](#)  
Full text annotation genonaut database including author information

## Master branch - Nightly-build

If you use these include **Nightly-built downloaded on XX-XX-XXXX** in your methods section.

[cosmoss.genonaut.gene\\_name.txt](#)  
gene name tab-delimited table (including annotator information)  
[cosmoss.genonaut.protein\\_name.txt](#)  
protein name tab-delimited table (including annotator information)  
[cosmoss.genonaut.aliases.txt](#)  
gene aliases tab-delimited table (including annotator information)  
[cosmoss.genonaut.description.txt](#)  
description lines tab-delimited table (including annotator information)  
[cosmoss.genonaut.descriptions.txt](#)  
description lines tab-delimited table  
[cosmoss.genonaut.annot](#)  
Transcript/Protein-wise GO annotation [BLAST2GO](#) annotation format  
[cosmoss.genonaut.gaf2](#)  
Transcript/Protein-wise GO annotation in GO Annotation File Format 2.0 ([GAF2.0](#))  
[cosmoss.genonaut.map](#)  
Locus-wise GO annotation in [topGO](#) input format  
[cosmoss.genonaut.txt](#)  
Full text annotation genonaut database including author information

## Additional functional annotations

[cosmoss.TAPScan.csv](#)  
TAPScan Transcription factor classification Lang et al. 2010 [Genome Biology and Evolution 2, 488-503](#)  
[cosmoss.mapman.txt](#)  
[MapMan](#) annotation D. Lang (unpublished)

## Mapping to old annotation releases

[Conversion of \*P. patens\* gene accessions numbers \(Excel xls file\)](#)

# Organelar genomes

## mitochondrial genome annotation

NC\_007945.1 mitochondrial genome] encoded mRNAs, tRNAs, rRNAs in GFF3 format.

## plastid genome annotation

NC\_005087.1 plastid genome encoded mRNAs, tRNAs, rRNAs in GFF3 format.

## plastid encoded proteins

85 proteins NC\_005087.1

## mitochondrial encoded proteins

42 proteins NC\_007945.1

# Version history

--Lang 14:18, 9 October 2012 (UTC) Updated V1.6 Genome Annotation Release

--Lang 05:35, 27 April 2010 (UTC) organelar proteins

--AndZim 07:27, 1 April 2010 (UTC) optimized LocusIDs (CGI)

--AndZim 10:47, 8 Oktober 2009 (UTC) removed additional bacterial and human contaminations.

--Lang 16:05, 16 September 2009 (UTC) changed description lines to genonaut status as of today.

--Lang 14:22, 7 October 2009 (UTC) added GFF3