



PULSE CROP DATABASE

Genomic, Genetic, and Breeding Resources
for Pulse Crop Improvement

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What is PCD?

PCD is a centralized database containing genomics, genetics, and breeding data and analysis tools for pulse crops. Annotated genome sequences are available to view and search and there is also information about genetic maps, molecular markers, and QTL. If you are a breeder who needs to manage private breeding program data, access to the Breeding Information Management System (BIMS) can be requested. Visit us at www.pulsedb.org to see everything that is available. Each issue of the newsletter will focus on a different type of data and what features are available. Short monthly how-to videos are available from the site.

New Ortholog/Paralog Search

While ortholog and paralog data are stored in our database as part of the [MCScanX](#) synteny analysis are viewable in the [Synteny Viewer](#) tool, there was not a way to search that data directly. To remedy this, we have designed the new [Ortholog/Paralog Search](#) feature. See the diagram below for details on how to use it.

Remember that clicking on mRNA names opens the details page for that mRNA where you can see all the functional annotation details. Can't find your genome on the list in the new search? Only genomes that are within the Synteny Viewer are currently available. The missing genomes will be added soon. Please [contact us](#) with feedback.

Ortholog/Paralog Search

Retrieve orthologs/paralogs that are detected using MCScanX (Wang et al. 2012) using default settings. The default search between different assemblies/annotations of the same species represents potentially the same gene. The search is used in the analysis and genes were used only when mRNAs are not available. The result table

Genome

Chromosome/Scaffold

Gene/Transcript Name No file chosen

Compare to

Chromosome/Scaffold

Select the first genome and refine with a chromosome or gene/mRNA name

Refine more by selecting the second genome and chromosome

See the Page 2 for the results!

Ortholog/Paralog Search Results

Link to download results as file

Genome 1 information

Genome 2 information

5476 records were returned

Download Table

#	Genome1	Chromosome/Scaffold1	Ortholog/Paralog1	Genome2	Chromosome/Scaffold2	Ortholog/Paralog2	Associated Gene
1	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G000500.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu08	Vigun08g000800.1	Vigun08g000800
2	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G000800.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu08	Vigun08g001200.1	Vigun08g001200
3	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G000800.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu09	Vigun09g260900.1	Vigun09g260900
4	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G000900.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu08	Vigun08g001300.1	Vigun08g001300
5	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G000900.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu09	Vigun09g260500.1	Vigun09g260500
6	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G001000.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu08	Vigun08g001400.1	Vigun08g001400
7	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G001000.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu09	Vigun09g260100.1	Vigun09g260100
8	Phaseolus vulgaris G19833 genome v2.1	Chr01	Phvul.001G001100.1	Vigna unguiculata L. Waip IT97K-499-35 genome v1.1	Vu08	Vigun08g001500.2	Vigun08g001500

Hyperlink to mRNA details

Hyperlinks to mRNA and gene details

Hyperlinks to genome information

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