

TRANSFAC® release 2024.2

The TRANSFAC® database on transcription factors, their genomic binding sites and DNA-binding motifs (PWMs), contains this new features:

- **JASPAR 2024 matrix library integration**

New position frequency matrices from the [JASPAR 2024](#) release either added as matrix entries (446 cases) or hyperlinked to existing counterparts in the TRANSFAC matrix library.

- **New enhancer data**

2,045 new human and mouse enhancers have been integrated together with 2,693 high confidence enhancer - promoter interactions (EPI).

- **Enhanced human SNP content**

The 2023 dbSNP release 156 data for human has been integrated and increases the number of SNPs mapped to promoter, enhancer, and silencer sequences by more than 13,800,000 new single nucleotide variations compared to the previously used version 155.

- **Ensembl version update**

Genomic information for genes, promoters, and ChIP fragments for the species human, mouse, rat, pig, macaque, Drosophila, and Arabidopsis is now based on Ensembl release 112.

- **Rat genome assembly update**

TRANSFAC now uses rat genome assembly mRatBN7.2.

- **Additional interactions between human transcription factors**

1,299 new human transcription factor interactions have been included from recent publications.

- **MATCH Suite update**

In its new 3.1 release, the MATCH Suite toolbox of TRANSFAC 2.0 was updated with the functionality of extended model organisms' gene regulation analysis. Now, gene sets coming from Zebrafish, Arabidopsis, Nematoda, Fruit fly or Baker's yeast can be analyzed based on functional categorization. You can narrow down the site search by selected transcription factors, or you can select the functional categories of your interest and restrict search for transcription factors belonging to those GO terms. As usual, a comprehensive report will be automatically generated with detailed description of the performed analysis steps, and the interactive results visualization mode will allow you to fine-tune the obtained results by applying additional filters.