

Resource Summary Report

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Recon x

RRID:SCR_006345

Type: Tool

Proper Citation

Recon x (RRID:SCR_006345)

Resource Information

URL: <http://humanmetabolism.org/>

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Description: A comprehensive biochemical knowledge-base on human metabolism, this community-driven, consensus metabolic reconstruction integrates metabolic information from five different resources: * Recon 1, a global human metabolic reconstruction (Duarte et al, PNAS, 104(6), 1777-1782, 2007) * EHMN, Edinburgh Human Metabolic Network (Hao et al., BMC Bioinformatics 11, 393, 2010) * HepatoNet1, a liver metabolic reconstruction (Gille et al., Molecular Systems Biology 6, 411, 2010), * Ac/FAO module, an acylcarnitine/fatty acid oxidation module (Sahoo et al., Molecular bioSystems 8, 2545-2558, 2012), * a human small intestinal enterocytes reconstruction (Sahoo and Thiele, submitted). Additionally, more than 370 transport and exchange reactions were added, based on a literature review. Recon 2 is fully semantically annotated (Le Novère, N. et al. Nat Biotechnol 23, 1509-1515, 2005) with references to persistent and publicly available chemical and gene databases, unambiguously identifying its components and increasing its applicability for third-party users. Here you can explore the content of the reconstruction by searching/browsing metabolites and reactions. Recon 2 predictive model is available in the Systems Biology Markup Language format.

Abbreviations: Recon x

Synonyms: Recon x Reconstruction of The Human Genome, Recon x - Reconstruction of The Human Genome, Recon x: Reconstruction of The Human Genome, Recon 2

Resource Type: data or information resource, database

Defining Citation: [PMID:23455439](#)

Keywords: metabolism, annotation, metabolite, reaction, genome, reconstruction

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DFG 0315756;
DFG 0315741;
NIGMS GM088244;
NSF 0643548;
Cystic Fibrosis Research Foundation 1060

Availability: Free, Acknowledgement requested

Resource Name: Recon x

Resource ID: SCR_006345

Alternate IDs: nlx_152079

Record Creation Time: 20220129T080235+0000

Record Last Update: 20260829T182949+0000

Ratings and Alerts

No rating or validation information has been found for Recon x.

No alerts have been found for Recon x.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 12 mentions in open access literature.

Listed below are recent publications. The full list is available at [NIF](#) .

Dehghan Manshadi M, et al. (2026) Higher order synthetic lethals are keys to minimize cancer treatment effects on non-tumor cells. PloS one, 21(4), e0342199.

Jae Lee S, et al. (2021) Chromosomal assembly of the Antarctic toothfish (*Dissostichus mawsoni*) genome using third-generation DNA sequencing and Hi-C technology. Zoological research, 42(1), 124.

Kim BM, et al. (2020) The Genome Assembly and Annotation of the Southern Elephant Seal *Mirounga leonina*. Genes, 11(2).

Chen L, et al. (2019) The genomic basis for colonizing the freezing Southern Ocean revealed by Antarctic toothfish and Patagonian robalo genomes. *GigaScience*, 8(4).

Wu X, et al. (2016) Prevalent Accumulation of Non-Optimal Codons through Somatic Mutations in Human Cancers. *PloS one*, 11(8), e0160463.

Bartel J, et al. (2015) The Human Blood Metabolome-Transcriptome Interface. *PLoS genetics*, 11(6), e1005274.

Aurich MK, et al. (2015) Prediction of intracellular metabolic states from extracellular metabolomic data. *Metabolomics : Official journal of the Metabolomic Society*, 11(3), 603.

Heinken A, et al. (2015) Systems biology of host-microbe metabolomics. *Wiley interdisciplinary reviews. Systems biology and medicine*, 7(4), 195.

Henderson D, et al. (2014) Personalized medicine approaches for colon cancer driven by genomics and systems biology: OncoTrack. *Biotechnology journal*, 9(9), 1104.

Kell DB, et al. (2014) Metabolomics and systems pharmacology: why and how to model the human metabolic network for drug discovery. *Drug discovery today*, 19(2), 171.

Sahoo S, et al. (2014) Membrane transporters in a human genome-scale metabolic knowledgebase and their implications for disease. *Frontiers in physiology*, 5, 91.

Swainston N, et al. (2013) An analysis of a 'community-driven' reconstruction of the human metabolic network. *Metabolomics : Official journal of the Metabolomic Society*, 9(4), 757.