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/

Proper Citation: Recon x (RRID:SCR_006345)

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 Nov??re, 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: database, data or information resource

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: 20250403T060514+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 11 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

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.

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

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.

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.