The calculation of gut metabolic modules from gene profile

Forked from The calculation of gut metabolic modules from gene profile

In 3 collections

Qi Wang

1BGI

Works for me dx.doi.org/10.17504/protocols.io.bq6gmzbw

BGI GIGA 1 more workspace

wangqi

ABSTRACT

The calculation of gut metabolic modules from gene profile

DOI

dx.doi.org/10.17504/protocols.io.bq6gmzbw

PROTOCOL CITATION

Qi Wang 2021. The calculation of gut metabolic modules from gene profile. protocols.io

https://dx.doi.org/10.17504/protocols.io.bq6gmzbw

COLLECTIONS

Protocols for Shotgun Metagenomics of 361 elderly women reveals gut microbiome change in bone mass loss;
Protocols for Linking gut microbiome to bone mineral density: a shotgun metagenomic study of 361 elderly women;
Protocols for Linking gut microbiome to bone mineral density: a shotgun metagenomic dataset from 361 elderly women;

FORK NOTE

FORK FROM

Forked from The calculation of gut metabolic modules from gene profile, Qi Wang

KEYWORDS

gut metabolic modules, Metagenomics data, KO profile

LICENSE

This is an open access protocol distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

CREATED

Jan 05, 2021

LAST MODIFIED

Jan 05, 2021

Citation: Qi Wang (01/05/2021). The calculation of gut metabolic modules from gene profile, https://dx.doi.org/10.17504/protocols.io.bq6gmzbw

This is an open access protocol distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited
OWNER HISTORY

Jan 05, 2021  Hongling Zhou
Jan 05, 2021  wangqi

PROTOCOL INTEGER ID

45992

PARENT PROTOCOLS

Part of collection
- Protocols for #34;Shotgun Metagenomics of 361 elderly women reveals gut microbiome change in bone mass loss#34;
- Protocols for #34;Linking gut microbiome to bone mineral density: a shotgun metagenomic study of 361 elderly women#34;
- Protocols for #34;Linking gut microbiome to bone mineral density: a shotgun metagenomic dataset from 361 elderly women#34;

GUIDELINES

The calculation of gut metabolic modules format gene profile

BEFORE STARTING

The input is the gene profile

1. Step 1: the putative amino acid sequences were translated from the gene catalogues and aligned against the proteins/domains in the KEGG databases (release 79.0, with animal and plant genes removed) using BLASTP (v2.2.26, default parameter except that -e 0.01 -b 100 -K 1 -F T -m 8). Each protein was assigned to the KO group by the highest scoring annotated hit(s) containing at least one HSP scoring >60 bits. The relative abundance profile of KOs was determined by summing the relative abundance of genes from each KO.

2. Step 2: The calculation of gut metabolic modules by one command:

   `java -jar gmms.jar -a 2 -d GMMs.v1.07.txt -i input_KO_profile -s average -o index`

   You could refer to the [http://www.raeslab.org/companion/gmms/](http://www.raeslab.org/companion/gmms/) for 'gmms.jar' and 'GMMs.v1.07.txt'.

Citation: Qi Wang (01/05/2021). The calculation of gut metabolic modules from gene profile. [https://dx.doi.org/10.17504/protocols.io.bq6qmzbw](https://dx.doi.org/10.17504/protocols.io.bq6qmzbw)

This is an open access protocol distributed under the terms of the Creative Commons Attribution License [https://creativecommons.org/licenses/by/4.0/], which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.