

Instruction manual for Disease-biomarker database

All data can be accessed, via the website

Database URL : <http://www.knapsackfamily.com/Biomarker/top.php>

OR

KNApSAcK family URL: http://www.knapsackfamily.com/KNApSAcK_Family/

Please click arrow indicated icon to access biomarker database

The screenshot displays the KNApSAcK Family website interface. At the top, there are logos for NAIST, FRI, and INBIO-SIS, along with the text "KNApSAcK Family" and "Since 2008.07 Ver.20". Below this, the "KNApSAcK Metabolomics" section includes "Core System" (Since 2004.04), "Search Engine" (Since 2008.12), and "GRAPH CLUSTERING" (Since 2019.06). The "Pocket Search for Functional Species" section is divided into three columns: "Food & Health", "Crude Drug", and "Biology". The "Biology" column contains several databases, with "Proteins & metabolites Biomarker" (Since 2019.07) highlighted by a black arrow. Other databases in the "Biology" column include "Metabolite Ecology Distribution" (Since 2015.02), "Biological Activity Natural Activity" (Since 2011.08), "Biological Activity Metabolite Activity" (Since 2013.01), "Motorcycle Metabolic Pathway" (Since 2011.08), "CobWeb Alkaloid Pathway" (Since 2018.07), and "Twins 化合物類似度データベース" (Since 2018.02). The "Food & Health" column includes "YAKUZEN 薬膳データベース" (Since 2015.09), "Lunch Box 食用データベース" (Since 2008.07), "DietNavi 病気予防データベース" (Since 2012.11), "FoodProcessor 加工食品データベース" (Since 2012.11), "DietDish 食べ合わせデータベース" (Since 2012.11), and "MARCHE 旬データベース" (Since 2014.04). The "Crude Drug" column includes "WorldMap 世界の薬用植物データベース" (Since 2009.06), "KAMPO 漢方薬、生薬データベース" (Since 2008.09), "JAMU IndonesiaHerb データベース" (Since 2009.11), "Tea Pot ハーブデータベース" (Since 2011.08), and "genKI 体質改善支援ツール" (Since 2019.02). At the bottom, there is a "Skewered KNApSAcK" section (串刺し検索 Since 2010.10).

1. The default page or home page of the biomarker database

Search option

a. To see all data (**List all**)

b. Keyword base data search

i. **All Types**


ii. **Biomarker**

iii. **Disease**

iv. **Type**

knapsackfamily.com/Biomarker/top.php#res



 Information :

Biomarker project has been performed based on Scientific Literatures. So please check details in references notated when you use information on Biomarker. This web-site is freely available but please cite Biomarker web site (<http://www.knapsackfamily.com/Biomarker/top.php>) when you use publications such as scientific paper and so on.

Keyword Search

Select by ...

All Types Biomarker Disease Type

List Clear Page Clear


Input data :

List of all data

List All Page Clear

2. To see all data of biomarker database, please click 'List All' menu



 Information :

Biomarker project has been performed based on Scientific Literatures. So please check details in references notated when you use information on Biomarker. This web-site is freely available but please cite Biomarker web site (<http://www.knapsackfamily.com/Biomarker/top.php>) when you use publications such as scientific paper and so on.

Keyword Search

Select by ...

All Types Biomarker Disease Type

Input data :

List of all data



Output

Biomarker	Disease	Type	Reference
(1-3)-B-D-glucans	Respiratory	Metabolite	Dillon,H.K., Miller,J.D., Sorenson,W.G., Douwes,J., Jacobs,R.R.Review of methods applicable to the assessment of mold exposure to children,Environ.Health Perspect.,vol.107 Suppl 3,1999
(18)F deoxyglucose (FDG)	Infection and inflammation	Metabolite	Rennen,H.J., Corstens,F.H., Oyen,W.J., Boerman,O.C.New concepts in infection/inflammation imaging,Q.J.Nucl.Med.,vol.45,2001
(18)F deoxyglucose (FDG)	Metabolic alterations in tumor cells	Metabolite	Czernin,J., Phelps,M.E.Positron emission tomography scanning: current and future applications,Annu.Rev.Med.,vol.53,2002
1,1-dichloro-2,2-bis-(p-chorophenyl)ethylene	Systemic lupus erythematosus (SLE)	Metabolite	Balluz,L., Philen,R., Ortega,L., Rosales,C., Brock,J., Barr,D., Kieszak,S.Investigation of systemic lupus erythematosus in Nogales, Arizona,Am.J.Epidemiol.,vol.154,2001
1,2,3,4-diepoxybutane (DEB)	Cancer	Metabolite	Jackson,M.A., Stack,H.F., Rice,J.M., Waters,M.D.A review of the genetic and related effects of 1,3-butadiene in rodents and humans,Mutat.Res.,vol.463,2000
1,2-epoxy-3-butene (EB)	Cancer	Metabolite	Jackson,M.A., Stack,H.F., Rice,J.M., Waters,M.D.A review of the genetic and related effects of 1,3-butadiene in rodents and humans,Mutat.Res.,vol.463,2000
1,3-Butadiene	carcinoma	Metabolite	Hughes K,Meek ME,Walker M,Beauchamp R;1,3-Butadiene: exposure estimation, hazard characterization, and exposure-response analysis,J Toxicol Environ Health B Crit Rev,vol.6,2003
1,3-butadiene	DNA damage	Metabolite	Moller,P., Knudsen,L.E., Loft,S., Wallin,H.The comet assay as a rapid test in biomonitoring occupational exposure to DNA-damaging agents and effect of confounding factors,Cancer Epidemiol Biomarkers Prev.,vol.9,2000
1,3-butadiene	Cancer	Metabolite	Fustinoni S,Perbellini L,Soleo L,Manno M,Foa V;Biological monitoring in occupational exposure to low levels of 1,3-butadiene,Toxicol Lett,vol.149,2004

3. By typing exact or partial string, the user can download desired **'all types'** matching information.
e.g. **man**

Keyword Search

Select by ...
 All Types Biomarker Disease Type

1. **Type here** →

↑ 2. **click here**

List of all data

Output: (pink color matching string)

Keyword Search

Select by ...
 All Types Biomarker Disease Type

List of all data

Number of matched data : 58

Biomarker	Disease	Type	Reference
Bioactive/immunoreactive (B:I) human chorion gonadotropin ratio	Embryonic well-being	Metabolite	Lasley,B.L., Overstreet,J.W.Biomarkers for assessing human female reproductive health, an interdisciplinary approach,Environ.Health Perspect.,vol.106 Suppl 4,1998
Bioactive/immunoreactive (B:I) human chorion gonadotropin ratio	failing pregnancies	Metabolite	Lasley,B.L., Overstreet,J.W.Biomarkers for assessing human female reproductive health, an interdisciplinary approach,Environ.Health Perspect.,vol.106 Suppl 4,1998
CD-54	Castle man's disease	Protein	Kim,J.E., Kim,C.J., Park,I.A., Kim,W.H., Seo,J.W., Jang,J.J., Kim,C.W., Park,S.H., Lee,H.S., Chi,J.G., Kim,Y.I., Ham,E.K.Clinicopathologic study of Castleman's disease in Korea.,J.Korean Med.Sci.,vol.15,2000
Cell adhesion molecules (CAM)	Cognitive performance	Protein	Grootendorst,J., Oitzl,M.S., Dalm,S., Enthoven,L., Schachner,M., de Kloet,E.R., Sandi,C.Stress alleviates reduced expression of cell adhesion molecules (N-CAM, L1), and deficits in learning and corticosterone regulation of apolipoprotein E knockout mice,Eur.J.Neurosci.,vol.14,2001
Chitinase-like protein YKL-40	Cystic fibrosis with pulmonary manifestations	Protein	Shao C, Li M, Li X, Wei L, Zhu L, Yang F, Jia L, Mu Y, Wang J, Guo Z, Zhang D, Yin J, Wang Z, Sun W, Zhang Z, Gao Y. A tool for biomarker discovery in the urinary proteome: a manually curated human and animal urine protein biomarker database. Mol Cell Proteomics. 2011
Chlorpyrifos	Impairment on maze performance , locomotion, and	Metabolite	Eskenazi B, Bradman A, Castorina R.Exposures of children to organophosphate pesticides and their potential adverse health effects,Environ.Health Perspec

4. By typing exact or partial string, the user can search desired matching **'biomarker'** and its associated information e.g. **Apolipo**

Keyword Search

Select by ... ↓ 1. select

All Types Biomarker Disease Type

→ 2. Type here

↑ 3. Click here

List of all data

Output:

Number of matched data : 49

Biomarker	Disease	Type	Reference
APOA1 (apolipoprotein-A1)	Complications of kidney transplant	Protein	Shao C, Li M, Li X, Wei L, Zhu L, Yang F, Jia L, Mu Y, Wang J, Guo Z, Zhang D, Yin J, Wang Z, Sun W, Zhang Z, Gao Y. A tool for biomarker discovery in the urinary proteome: a manually curated human and animal urine protein biomarker database. Mol Cell Proteomics. 2011
Apolipoprotein A-I	Nephrotic syndrome with focal	Protein	Shao C, Li M, Li X, Wei L, Zhu L, Yang F, Jia L, Mu Y, Wang J, Guo Z, Zhang D, Yin J, Wang Z, Sun W, Zhang Z, Gao Y. A tool for biomarker discovery in the urinary proteome: a manually curated human and animal urine protein biomarker database. Mol Cell Proteomics. 2011
Apolipoprotein A-I	Malignant neoplasm of bladder	Protein	Shao C, Li M, Li X, Wei L, Zhu L, Yang F, Jia L, Mu Y, Wang J, Guo Z, Zhang D, Yin J, Wang Z, Sun W, Zhang Z, Gao Y. A tool for biomarker discovery in the urinary proteome: a manually curated human and animal urine protein biomarker database. Mol Cell Proteomics. 2011
Apolipoprotein A-I	Nephrotic syndrome	Protein	Shao C, Li M, Li X, Wei L, Zhu L, Yang F, Jia L, Mu Y, Wang J, Guo Z, Zhang D, Yin J, Wang Z, Sun W, Zhang Z, Gao Y. A tool for biomarker discovery in the urinary proteome: a manually curated human and animal urine protein biomarker database. Mol Cell Proteomics. 2011

5. By typing exact or partial string, the user can download desired matching ‘disease’ and its associated information. e.g. **cancer**

Keyword Search

Select by ...

All Types Biomarker Disease Type

2. Type here → cancer

↓ 1. Select

List Clear Page Clear

↑ 3. click here

Input data :

List of all data

List All Page Clear

Output:

Number of matched data : 846

Biomarker	Disease	Type	Reference
1,2,3,4-diepoxybutane (DEB)	Cancer	Metabolite	Jackson,M.A., Stack,H.F., Rice,J.M., Waters,M.D.A review of the genetic and related effects of 1,3-butadiene in rodents and humans,Mutat.Res.,vol.463,2000
1,2-epoxy-3-butene (EB)	Cancer	Metabolite	Jackson,M.A., Stack,H.F., Rice,J.M., Waters,M.D.A review of the genetic and related effects of 1,3-butadiene in rodents and humans,Mutat.Res.,vol.463,2000
1,3-butadiene	Cancer	Metabolite	Fustinoni S,Perbellini L,Soleo L,Manno M,Foa V;Biological monitoring in occupational exposure to low levels of 1,3-butadiene,Toxicol Lett,vol.149,2004
1-hydroxypyrene	Cancer	Metabolite	Jongeneelen,F.J.Benchmark guideline for urinary 1-hydroxypyrene as biomarker of occupational exposure to polycyclic aromatic hydrocarbons,Ann.Occup.Hyg.,vol.45,2001
1-hydroxypyrene	Cancer	Metabolite	Georgiadis,P., Kyrtopoulos,S.A.Molecular epidemiological approaches to the study of the genotoxic effects of urban air pollution,Mutat.Res.,vol.428,1999
1-hydroxypyrene glucuronide	Cancer	Metabolite	Phillips,D.H.Polycyclic aromatic hydrocarbons in the diet,Mutat.Res.,vol.443,1999
11beta-HSD2 enzyme	breast cancer	Protein	Krozowski,Z., Li,K.X., Koyama,K., Smith,R.E., Obeyesekere,V.R., Stein-Oakley,A., Sasano,H., Coulter,C., Cole,T., Sheppard,K.E.The type I and type II 11beta-hydroxysteroid dehydrogenase enzymes,J Steroid Biochem.Mol.Biol,vol.69,1999

6. In this database, two types of biomarker i. Protein ii. Metabolite. To search ‘type’ base biomarker, e.g. **Metabolite**

Keyword Search

Select by ...

All Types Biomarker Disease Type

2. Type here

Input data :

3. Click here

List of all data

Output:

Number of matched data : 1224

Biomarker	Disease	Type	Reference
(1-3)-B-D-glucans	Respiratory	Metabolite	Dillon,H.K., Miller,J.D., Sorenson,W.G., Douwes,J., J acobs,R.R.Review of methods applicable to the assesment of mold exposure to children,Environ.Health Perspect.,vol.107 Suppl 3,1999
(18)F deoxyglucose (FDG)	Metabolic alterations in tumor cells	Metabolite	Czernin,J., Phelps,M.E.Positron emission tomograph y scanning: current and future applications,Annu. Rev. Med.,vol.53,2002
(18)F deoxyglucose (FDG)	Infection and inflammation	Metabolite	Rennen,H.J., Corstens,F.H., Oyen,W.J., Boerman,O. C.New concepts in infection/inflammation imaging,Q. J.Nucl.Med.,vol.45,2001
1,1-dichloro-2,2-bis-(p-chorophenyl)ethylene	Systemic lupus erythematosus (SLE)	Metabolite	Balluz,L., Philen,R., Ortega,L., Rosales,C., Brock,J., Barr,D., Kieszak,S.Investigation of systemic lupus er ythematosus in Nogales, Arizona,Am.J.Epidemiol.,vo l.154,2001
1,2,3,4-diepoxybutane (DEB)	Cancer	Metabolite	Jackson,M.A., Stack,H.F., Rice,J.M., Waters,M.D.A r eview of the genetic and related effects of 1,3-butadi ene in rodents and humans,Mutat.Res.,vol.463,2000
1,2-epoxy-3-butene (EB)	Cancer	Metabolite	Jackson,M.A., Stack,H.F., Rice,J.M., Waters,M.D.A r eview of the genetic and related effects of 1,3-butadi ene in rodents and humans,Mutat.Res.,vol.463,2000
1,3-Butadiene	carcinoma	Metabolite	Hughes K,Meek ME,Walker M,Beauchamp R;1,3-But adiene: exposure estimation, hazard characterizatio n, and exposure-response analysis,J Toxicol Environ Health B Crit Rev,vol.6,2003
1,3-butadiene	DNA damage	Metabolite	Moller,P., Knudsen,L.E., Loft,S., Wallin,H.The comet assay as a rapid test in biomonitoring occupational e xposure to DNA-damaging agents and effect of conf ounding factors,Cancer Epidemiol Biomarkers Prev., vol.9,2000