



silver project가

2300 가

가

DNA가

DNA , 20 가

가

가

가

가

가

가

1 2 3 4 ()

다카라코리아바이오메디칼주식회사

Naruya Saitou

The screenshot shows a web browser window displaying the Silver Project website. The page has a light green background with a grid of text boxes. In the center, there is a phylogenetic tree diagram showing the relationships between various species: Human, Chimpanzee, Gorilla, Orangutan, and Gibbon. Above the tree, the text reads "Silver Project: Ape Genome Sequencing". Below the tree, there is a link: "This is Homo Page in English" and "Home Page in Japanese". The page also includes a "News" section with two items dated 1/21/02 and 1/4/02, and a "Main body of Silver Project database" section with four links to human and ape sequence data comparisons. At the bottom, there is a list of links: "Welcome to Silver Project", "List of published papers related to and under Silver Project", "Presentations related to and under Silver Project", and "How to proceed Silver Project".

1

Silver Project

URL <http://sayer.lab.nig.ac.jp/~silver/index - j.html>

가

30

5%

가

1.5%

“

가

DNA ”

가

.1).

가

3

14

5

가

1

0.6%

가

가

“ (effective number of nucleotides) ”

500

가

. Exon

1.5

$\times 0.006 \times 1/2 = 45$

(

가

가

intron

)

가

3000

1

$3000 \times 5 = 1.5$

가

1 2 3 4

()

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Naruya Saitou

1

Silver Project

Promotor

Promotor

aromatic L - amino acid decarboxylase
 brain - 2/N - Oct 3
 differentiation - dependent A4 protein
 dystrophin(Duchenne muscular dystrophy)
 dystrophin(Purkinje promoter, alternatively spliced)
 monoamine oxidase A
 nerve growth factor
 neurofilament M

Code ()

brain natriuretic protein
 - nerve growth factor, exon 2
 gap junction protein connexin - 36, exon 2
 5 - hydroxytryptamine(serotonin) receptor 1A
 5 - hydroxytryptamine(serotonin) receptor 1F
 5 - hydroxytryptamine(serotonin) receptor 2A, exon 3
 OTX1, exon 3
 OTX2, exon 3
 voltage - gated sodium channel subunit gene, exon 24
 indolethylamine N - methyltransferase
 differentiation - dependent A4 protein
 5 - hydroxytryptamine(serotonin) receptor 1B

5 - hydroxytryptamine(serotonin) receptor 1E
5 - hydroxytryptamine(serotonin) receptor 1D
histamine H1 receptor
histamine H2 receptor
histamine N - methyltransferase
muscarinic acetylcholine receptor m2
muscarinic acetylcholine receptor m3
homeodomain protein OPTX2
guanine nucleotide - binding regulatory protein - coupled receptor

ABO blood group gene
- 1, 3 - galactosyltransferase polypeptide 1
UDP - Gal: GlcNAcb - 1, 3 - galactosyltransferase 5
- 1, 4 - N - acetylglucosaminyl and/or galactosyl transferase

Silver Project
database

, DDBJ/EMBL/GenBank

1 2 3 4 ()

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Naruya Saitou

2.

DNA

가 silver project 1999 2), 3). 1 가 silver project

35

DDBJ/EMBL/GenBank database (1). Hox exon 92 가 psudogene cluster A 4), 5). psudogene fosmid library BAC (bacterial artificial chromosome) library 가 random shot gun 가

가 Rh ABO 가 6), 7). 가

가

가

가 21 가

가

Java)

(C

가

SNP(single nucleotide polymorphism; 1)

가

가

가
가

가

가

3.

가

가?

DNA

가

4

nucleotide가

100

, A, C, G, T 4

21

가

DNA

가

“ ”

【 】

가

1) Naruya Saitou: (2000) 53: 1082 - 1086

2) Naruya Saitou: (2000) 70: 231 - 233

3) Naruya Saitou: (2000) 45: 2604 - 2611

4) Irie A, et al: J. Biol. Chem.(1998) 273: 15866 - 15871

5) Muchmore EA, et al: Am. J. Phys Anthropol.(1998) 107 : 187 - 198

6) Naruya Saitou et al: (1999) 18: 1039 - 1047

7) Kitano T, et al: J. Mol. Evol.(1999) 49: 615 - 626

