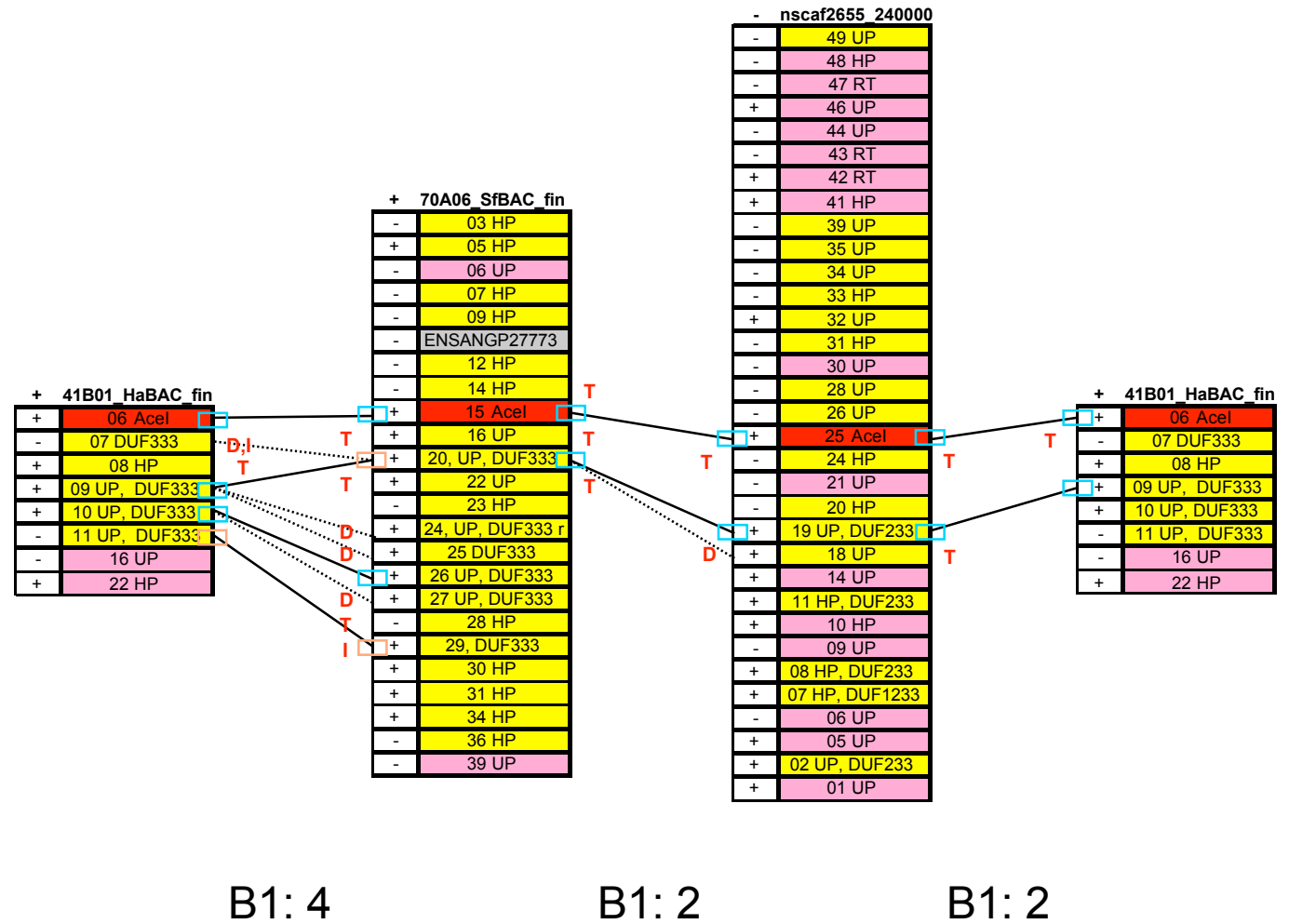


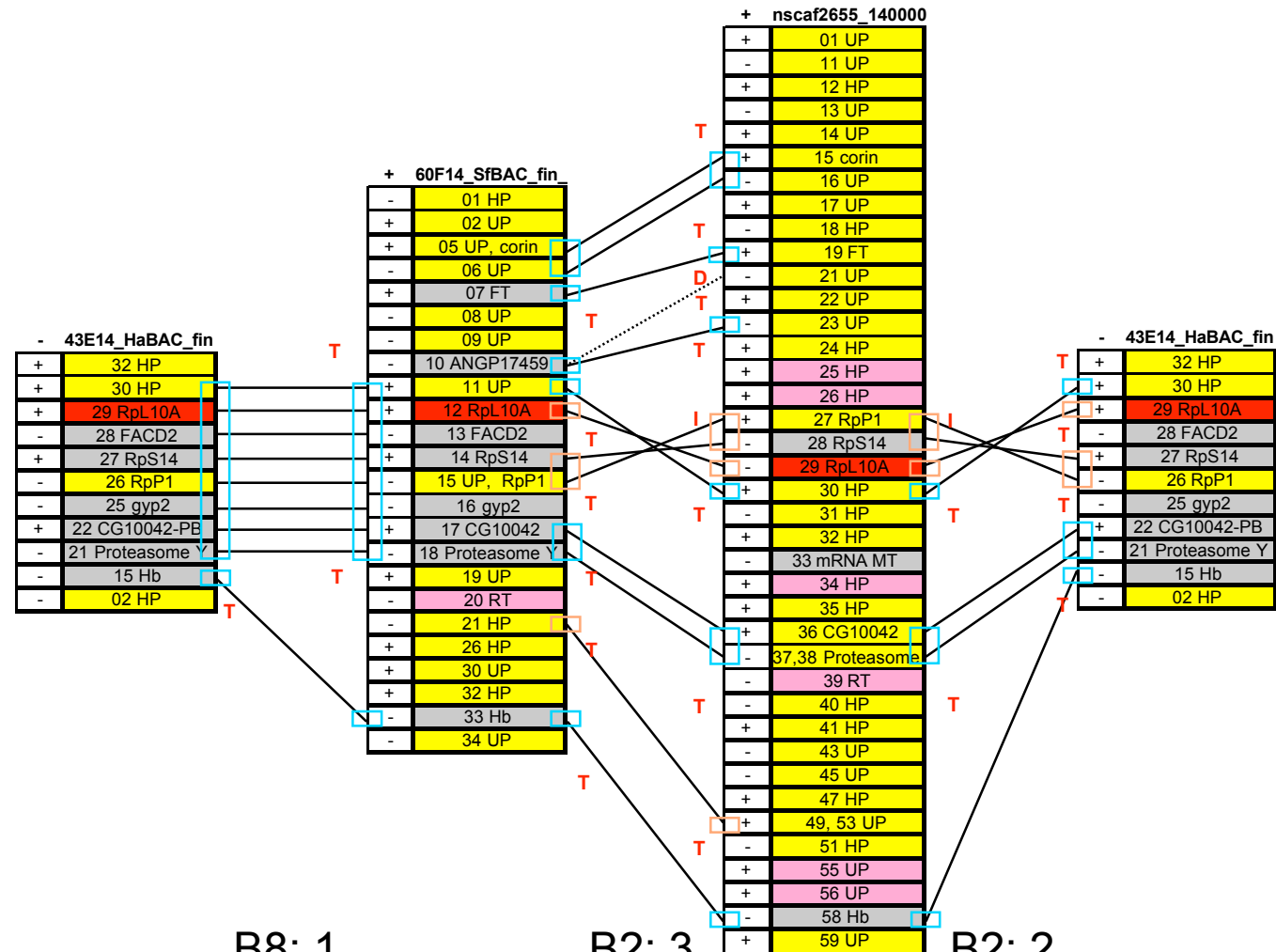
# Ace 1 region



**Ace1**, Acetylcholinesterase precursor  
**ENSANGP27773**, similar to protein  
**DUF233** related  
 RT, Reverse Transcriptase



# RpL10A region



**ANGP17459**, lipid phosphatase

**CG10042-PB**

**FACD2**, Fanconi anemia group D2 prot. homolog

**FT**, folate transporter

**gyp2**, gtpase-activating protein gyp2

**Hb**, Hunchback protein

**mRNA MT**, mRNA (guanine7) methyltransferase

**phd**, putative phd finger domain

**Proteasome Y**, proteasome subunit Y

**RpL10A**, 60S ribosomal protein L10A

**RpS14**, mitochondrial 28S ribosomal protein S14

**RT**, reverse transcriptase

B8: 1

B1: 1

B2: 3

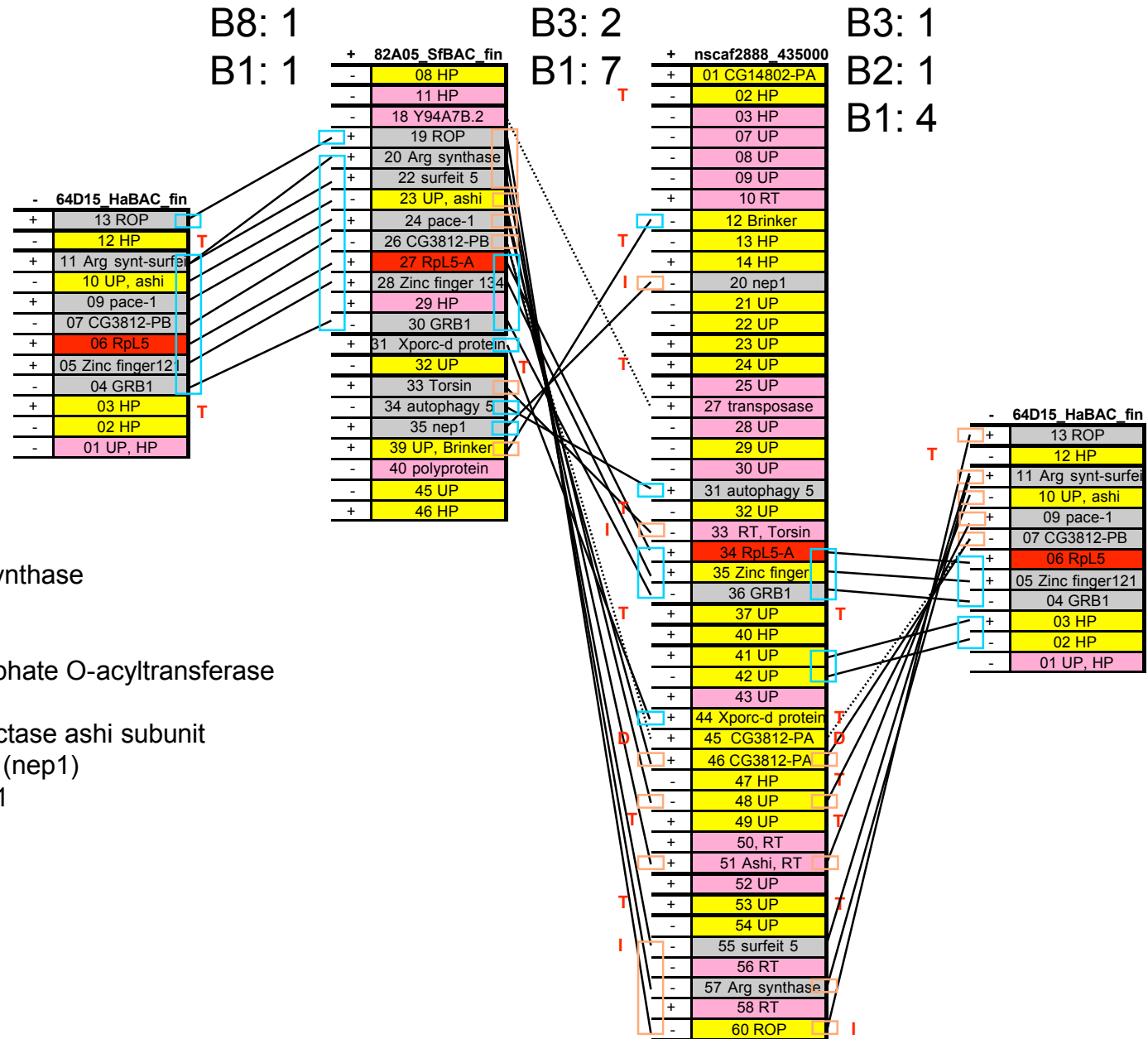
B1: 6

B2: 2

B1: 3

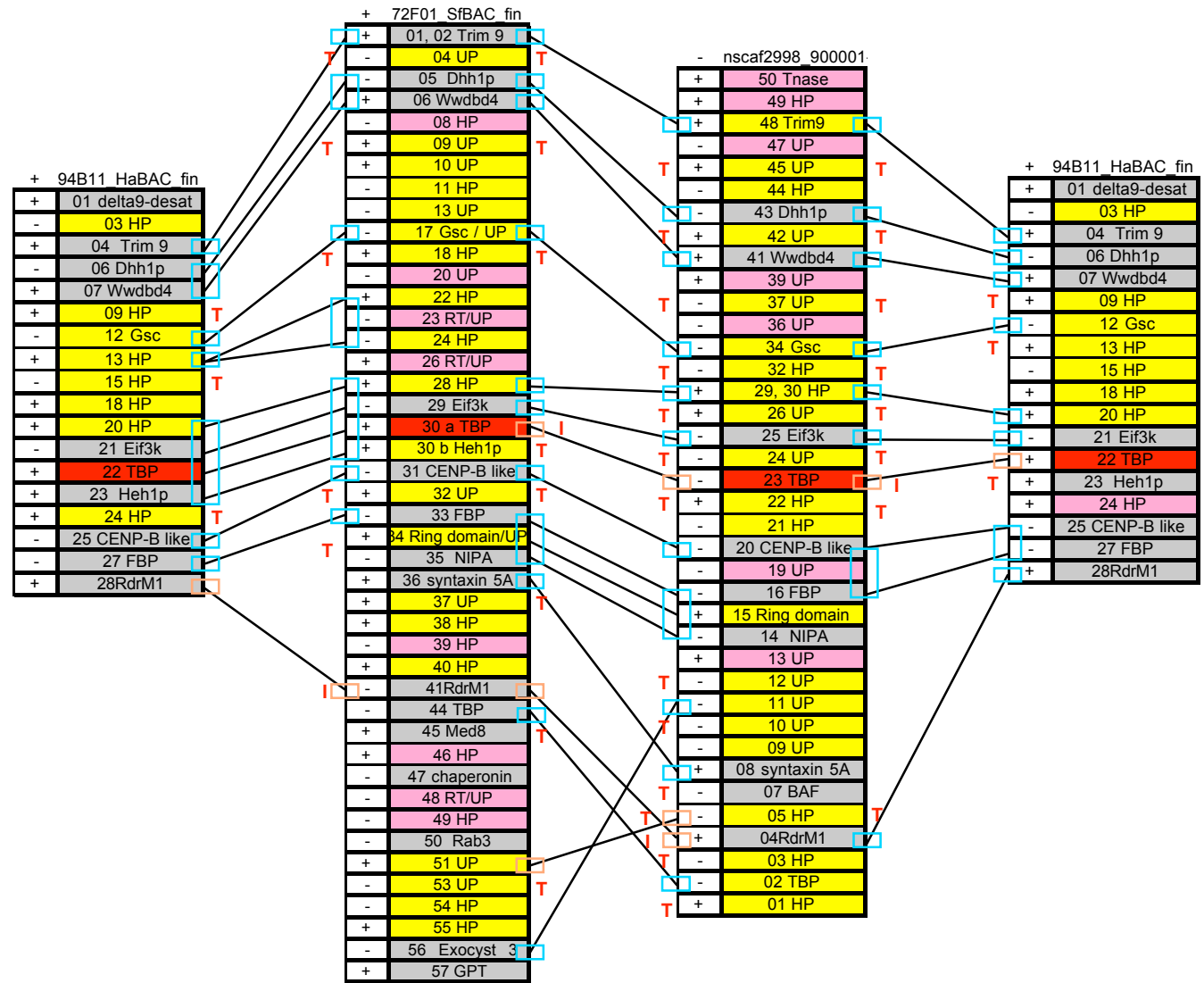
# RpL5a region

See also figure S4



**Arg synthase**, argininosuccinate synthase  
**autophagy 5**, autophagy protein 5  
**CG14802-PA**  
**CG3812-PB**, 1-acylglycerol-3-phosphate O-acyltransferase  
**GRB1**, nuclear protein GRB1  
**ashi**, NADH-ubiquinone oxydoreductase ashi subunit  
**nep1**, nucleolar essential protein 1 (nep1)  
**pace-1**, ezrin-binding protein pace-1  
**polyprotein**  
**ROP**  
**RpL5**, 60S ribosomal protein L5  
**RT**, reverse transcriptase  
**surfeit 5**  
**Torsin**, Torsin B precursor  
**transposase**  
**Xporc-d protein**, porcupine, membrane bound o-acyltransferase  
**Y94A7B.2**, protein Y94A7B.2  
**Zinc finger protein 121**

# TBP region



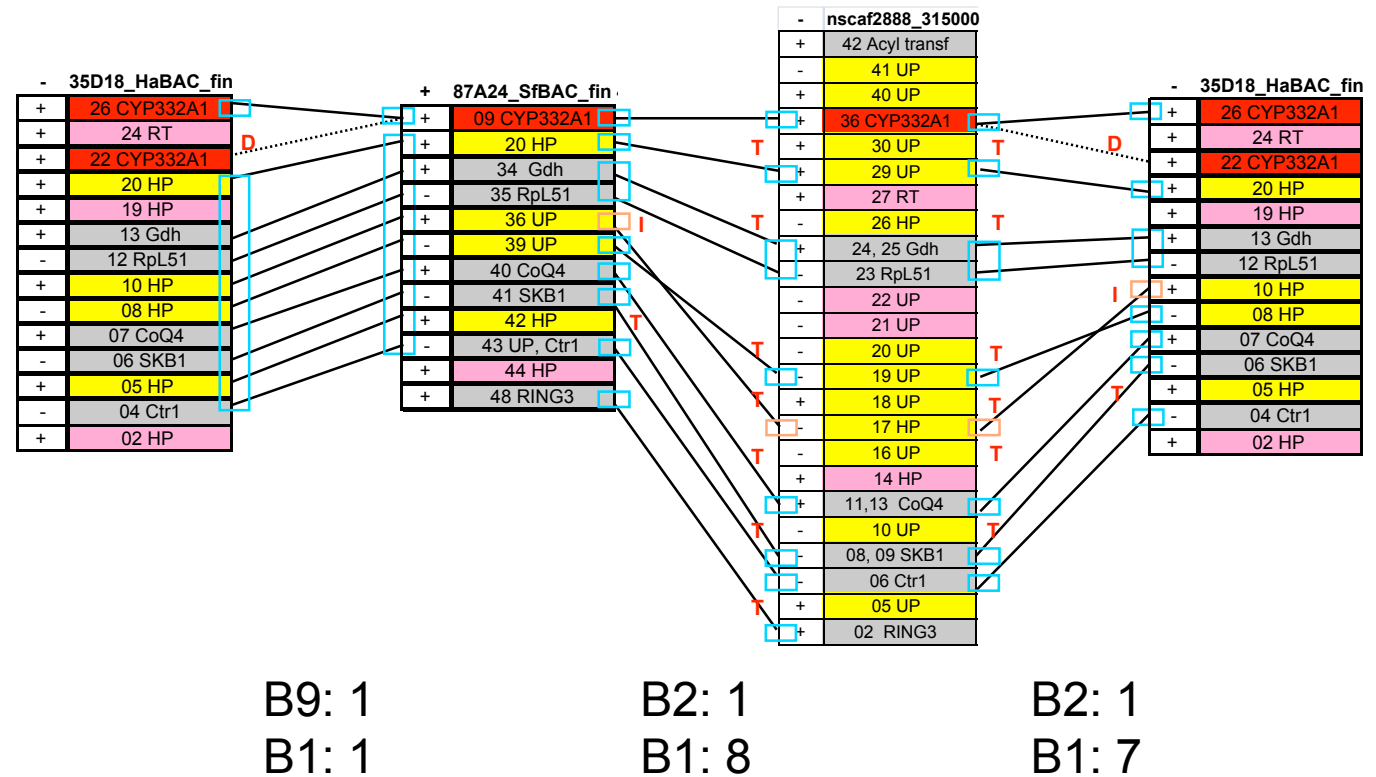
**BAF**, similar to ENSANGP00000023184  
**Chaperonin**, t-complex polypeptide 1 chaperonin delta chain  
**Delta9 desat**, stearoyl-CoA 9-desaturase  
**Dhh1p**, Crystal Structure of the Dead Box Protein Dhh1p (Translation regulation)  
**Eif3k**, Crystal Structure Of Human Eif3k  
**Exocyst3**, Exocyst complex component 3 (Exocyst complex component Sec6)  
**FBP**, Pre-mRNA-processing factor 40 homolog A (Formin-binding protein 3)  
**Gsc**, Goosecoid  
**GPT**, UDP-N-acetylglucosamine–dolichylphosphate N-acetylglucosaminophosphotransferase  
**Heh1p**, similar to KIAA1033  
**Med8**  
**NIPA**, NIPA-like domain containing 1  
**Rab3 GTPase**, Rab3 GTPase-activating protein non-catalytic subunit  
**RdrM1**, Ribonucleoside-diphosphate reductase large subunit  
**RT**, reverse transcriptase  
**syntaxin 5A**  
**TBP**, TATA-box-binding protein  
**Tnase**, Transposase  
**Trim9**, Tripartite motif-containing protein 9  
**Wwdbd4**, WW domain binding protein 4

B4: 1  
 B1: 6  
 B2: 1

B3: 1  
 B1: 12

B2: 1  
 B1: 8

# CYP332A1 region (see also Fig.1)



**Acyl transf**, putative acyl transferase, similar to  
ENSANGP00000011489

**CoQ4**, ubiquinone biosynthesis protein, Coenzyme Q4-like protein

**Ctr1**, high-affinity copper uptake protein 1

**GDH**, glucose dehydrogenase precursor short protein

**RING3**, female sterile homeotic (fsh) homolog RING3

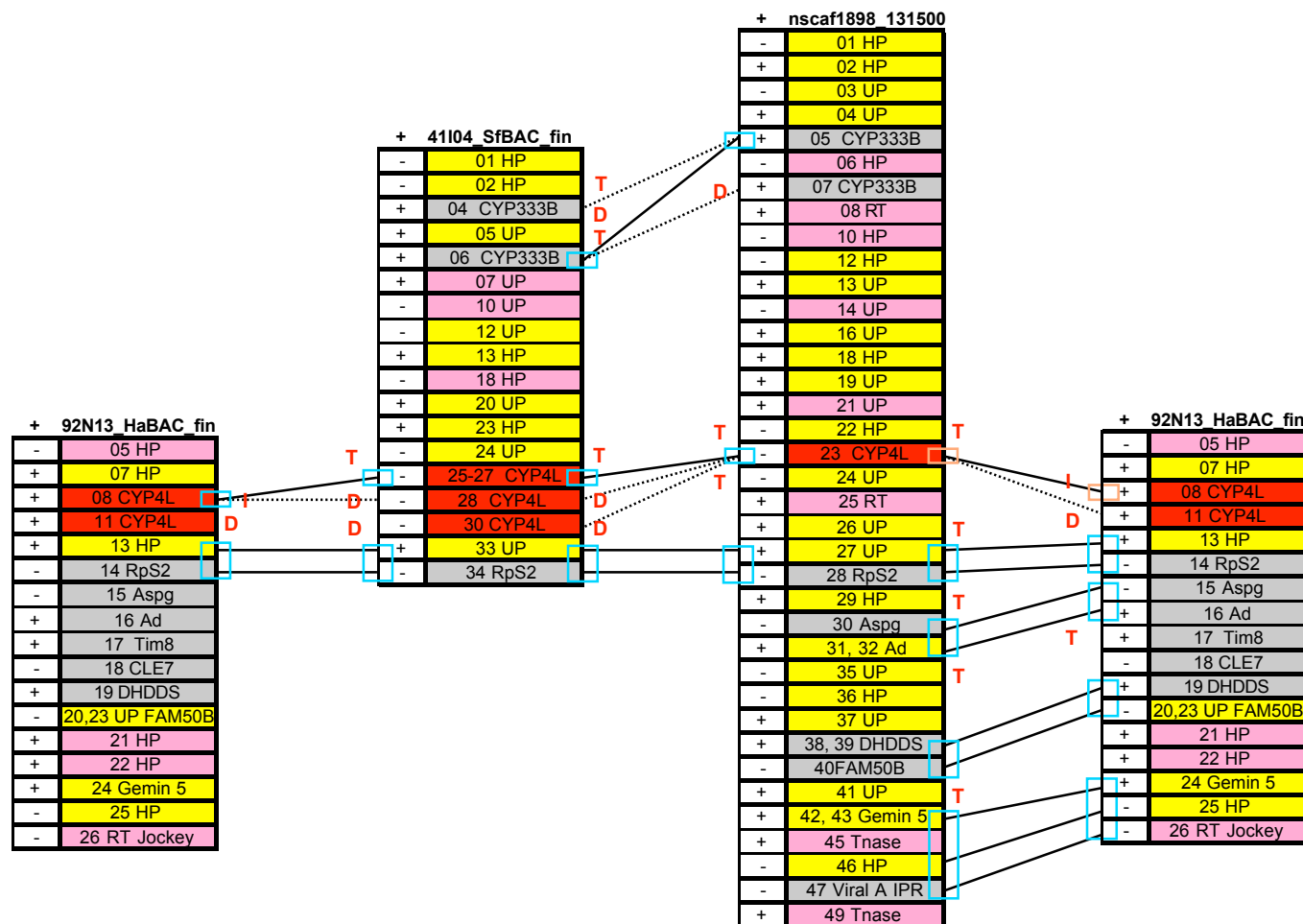
**RpL51**, similar to mitochondrial ribosomal protein, L51

**RT jockey**, reverse transcriptase from mobile element jockey

**RT**, reverse transcriptase

**SKB1**, protein arginine N-methyltransferase 5 (Shk1 kinase-binding protein 1 homolog)

# CYP4L region



**Aspg**, Human Aspartylglucosaminidase

**FAM50B**, XAP-5-like protein

**Ad**, adenosine deaminase

**CLE7**, CLE7 protein

**CYP333B**, cytochrome P450

**DHDDS**, dehydrodolichyl diphosphate synth.

**Gemin 5**

**RpS2**, 40S ribosomal protein S2

**RT jockey**, jockey reverse transcriptase

**Tim8**, translocase of inner mitoch. memb. 8 homolog b

**Tnase**, transposase

**Viral A IPR**, viral A-type inclusion protein repeat

B2: 1

B1: 1

B2: 1

B1: 2

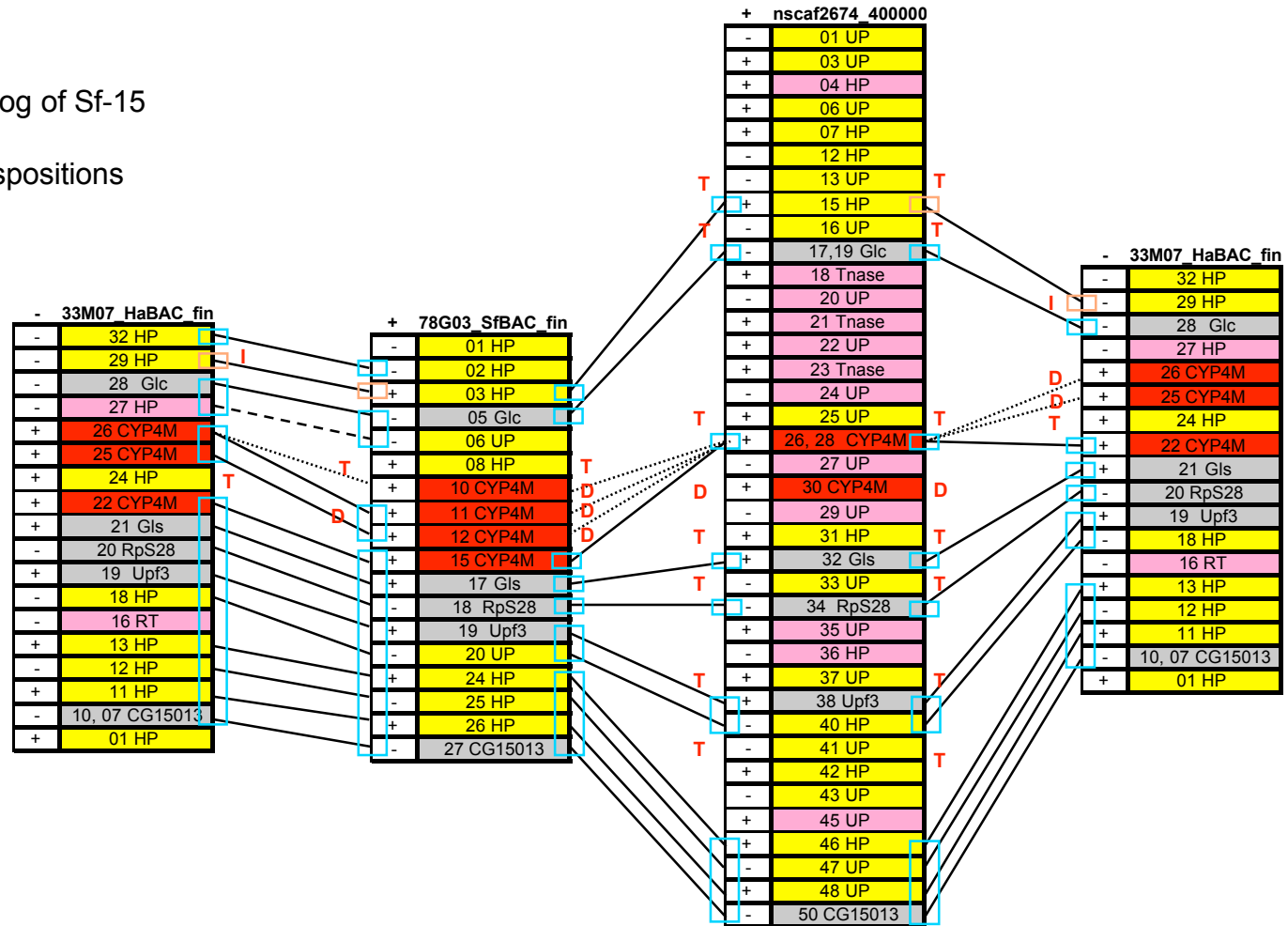
B3: 1

B2: 3

B1: 1

# CYP4M region

*Bm* #26-28 (*CYP4M5*) is the ortholog of *Sf*-15 (*CYP4M18*) and *Ha*-22 (*CYP4M6*)  
 Independent duplications and transpositions occurred in *Bm* and in Noctuids



**CG15013**,CG15013-PA, isoform A

**Glc**, lactase-phlorizin hydrolase precursor (lactase-glycosylceramidase)

**Gls**, glutaminase (EC 3.5.1.2) precursor, mitochondrial

**RpS28**, similar to mitochondrial ribosomal protein S28

**RT**, reverse transcriptase

**Tnase**,Transposase

**Upf3**, Upf3 regulator of nonsense transcripts-like protein B

B9: 1

B2: 2

B1: 2

B4: 1

B2: 1

B1: 5

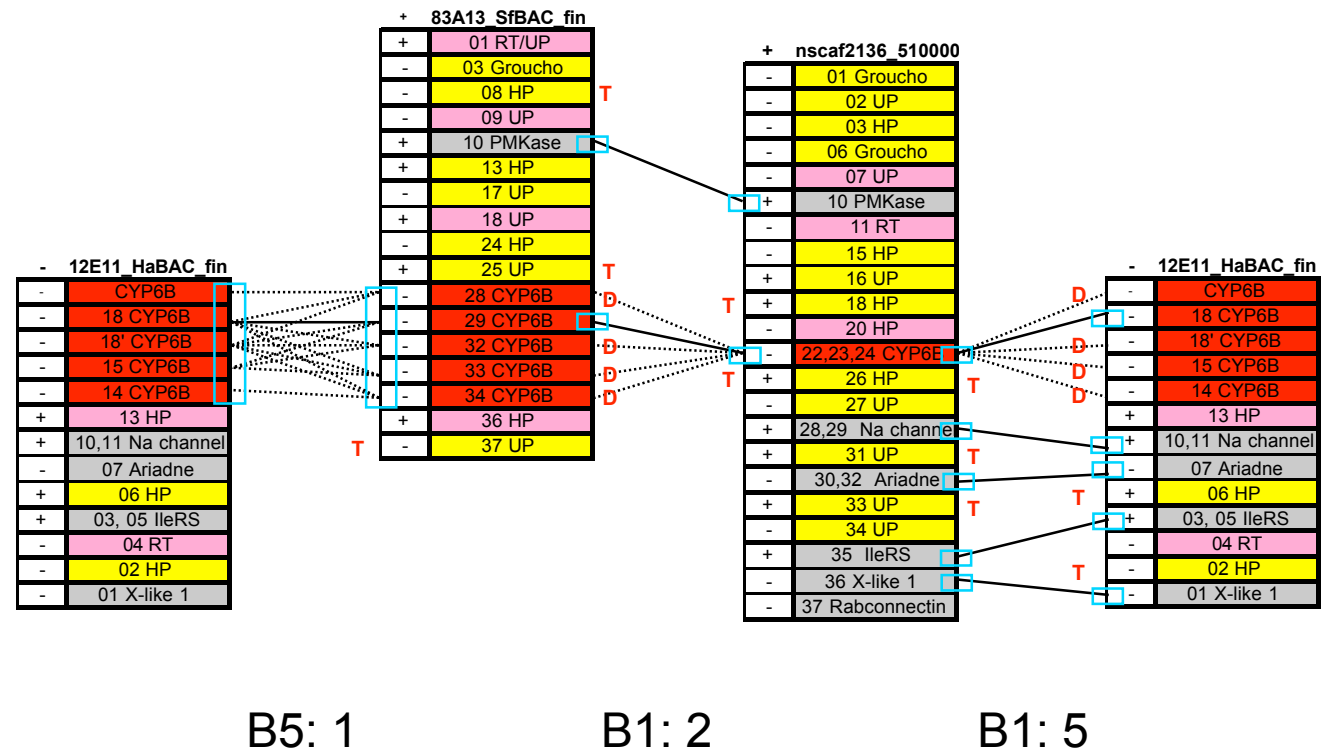
B4: 1

B2: 1

B1: 5



# CYP6B region



**Ariadne**, Ariadne ubiquitin-conjugating enzyme E2 binding protein homolog 1 (*Drosophila*), CG5659-PC, isoform C

**IleRS**, Isoleucyl-tRNA synthetase (ILE--tRNA ligase)

**Na channel**, Sodium channel protein para (paralytic)

**PMKase**, putative Phosphomevalonate kinase

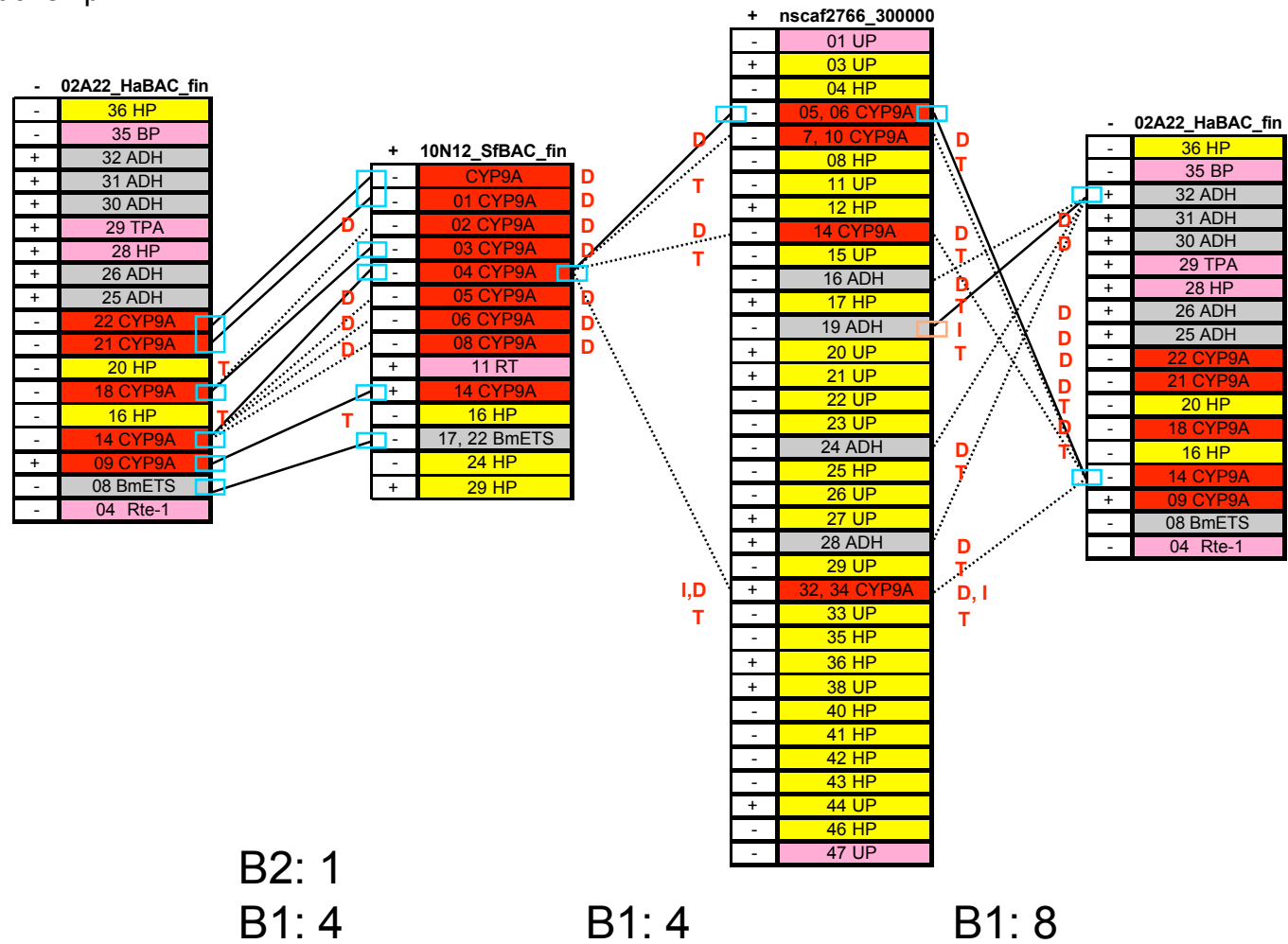
**Rabconnectin**

**RT**, reverse transcriptase

**X-like 1**, DmX-like 1 (X-like 1 protein)

# CYP9A region

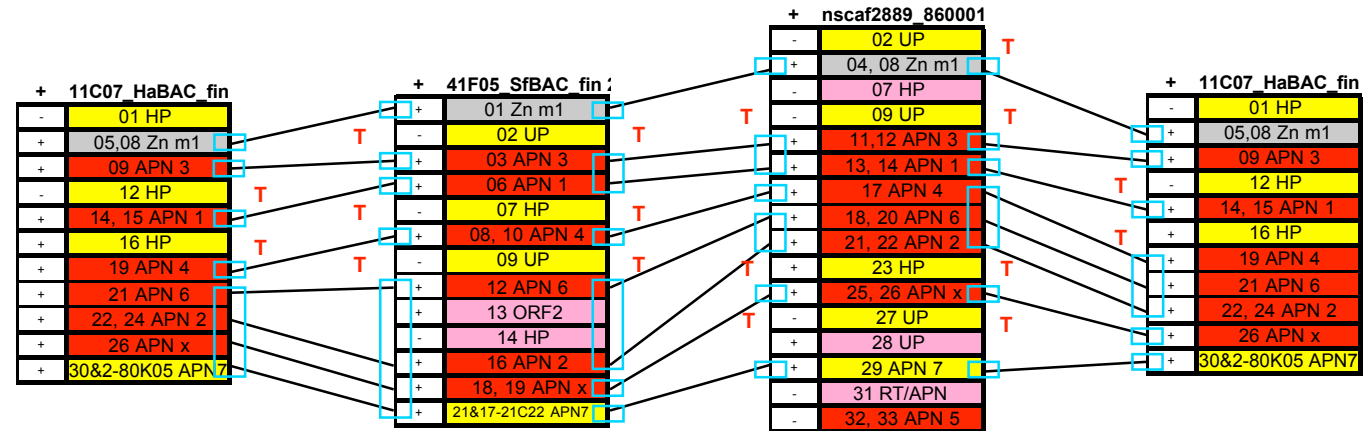
See also Figure 4 for the relationship between the CYP9A genes



**ADH**, alcohol dehydrogenase  
**BmETS**, transcription factor BmETS  
**BP**, blastopia polyprotein  
**RT**, reverse transcriptase  
**Rte-1**, Rte-1 element  
**TPA**, endonuclease-reverse transcriptase

# APN region

See also figure S3



B4: 1  
B1: 4

B2: 2  
B1: 4

B3: 1  
B1: 5

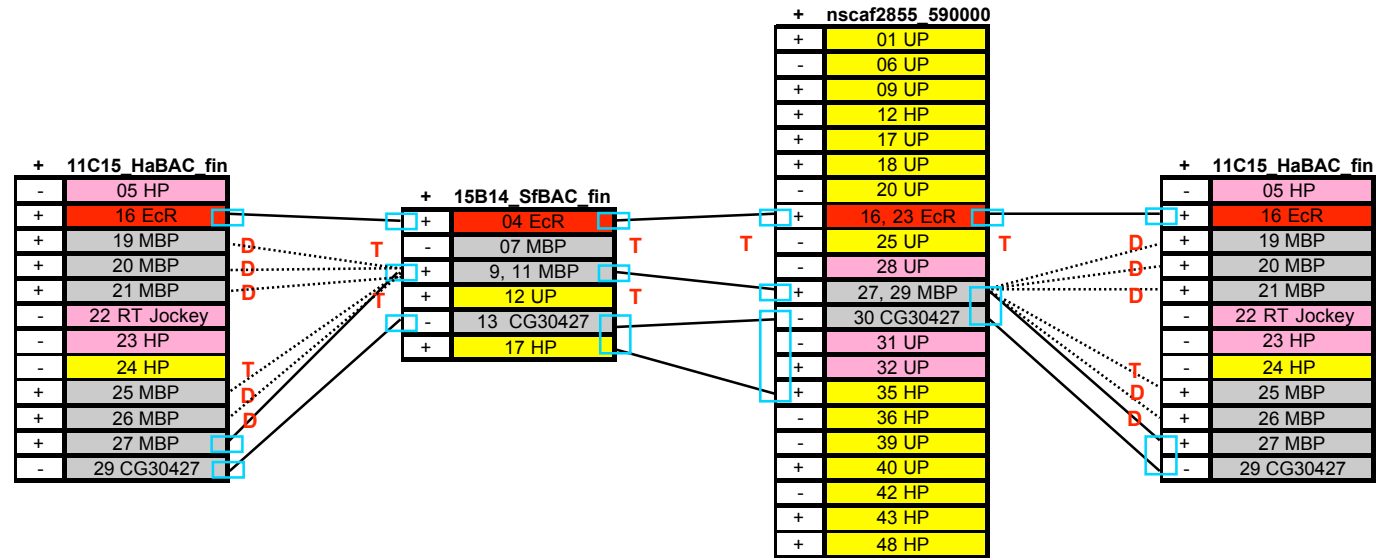
**APN**, putative membrane alanyl aminopeptidase precursor (CryIAC receptor)

**ORF2**, putative ORF2-encoded protein

**RT**, putative reverse transcriptase

**Zn m1**, Zn m1

# EcR region



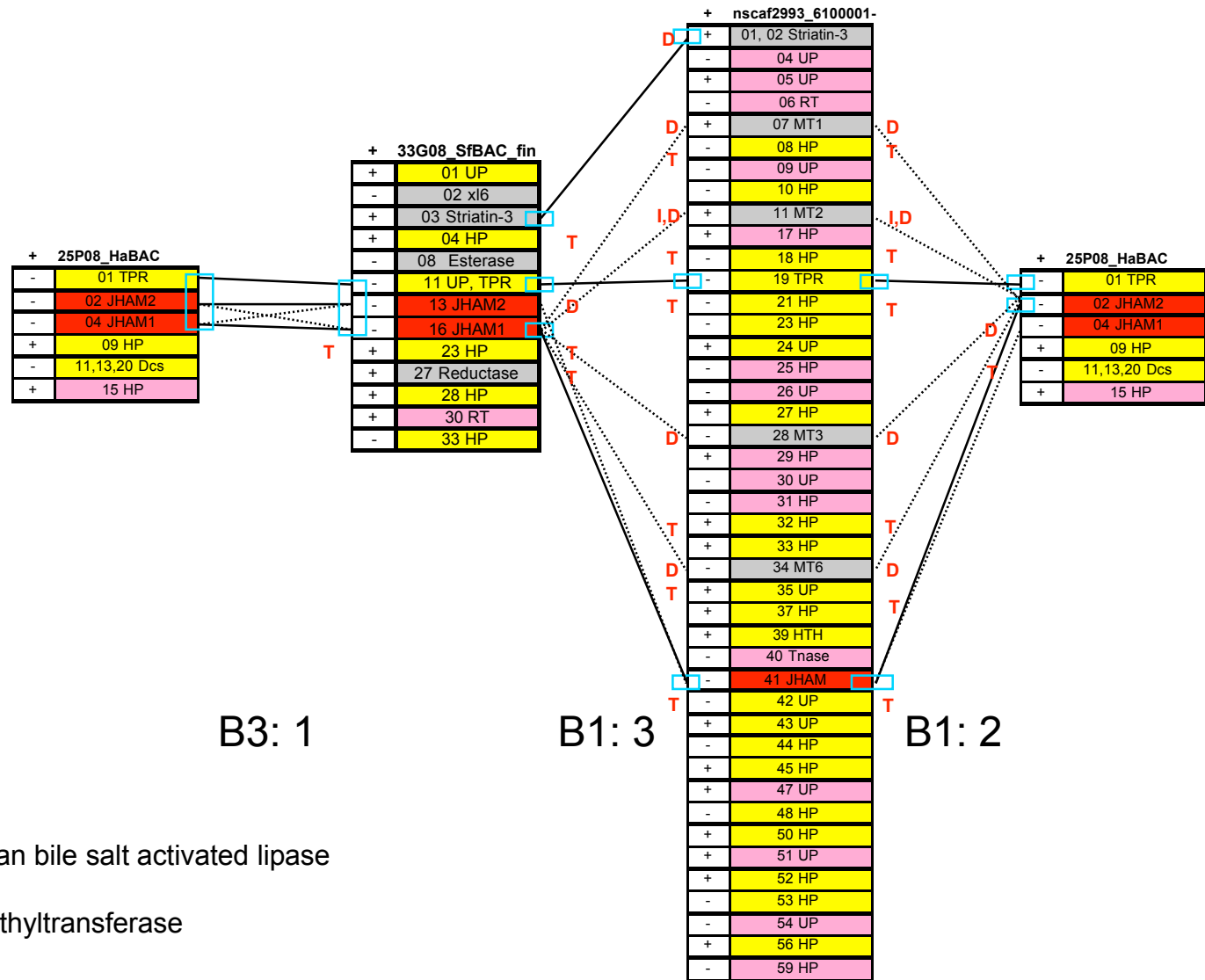
B1: 4

B2: 1  
B1: 2

B1: 3

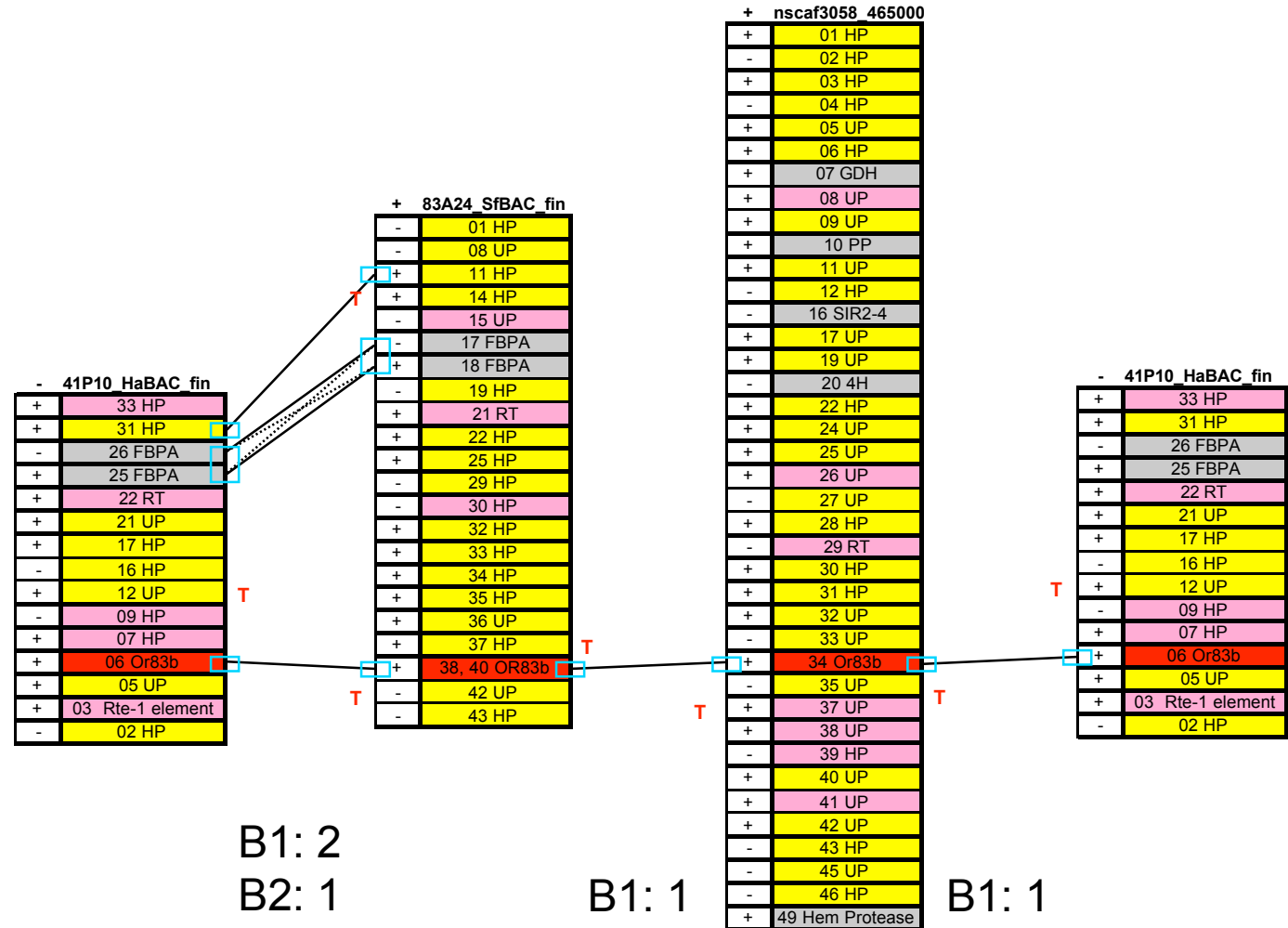
**CG30427**, putative CG30427-PC, isoform C  
**EcR**, Ecdysone receptor  
**MBP**, putative multi-binding protein

# JHAMT region



- Dcs**, Dachshund
- Esterase**, catalytic domain of human bile salt activated lipase
- HTH**, HTH domain
- JHAMT**, juvenile hormone acid methyltransferase
- MT**, Methyltransferase
- Reductase**, 3-dehydroecdysone 3alpha-reductase -like
- RT**, Reverse Transcriptase
- Striatin**, Striatin-3 (Cell-cycle autoantigen SG2NA) (S/G2 antigen)
- Tnase**, Transposase
- TPR**, tetratricopeptide repeat protein
- xl6**, putative x16

# Or83b region



**4H**, eukaryotic translation initiation factor 4H

\***FBPA**, Fructose-1,6-Bisphosphate Aldolase (E.C.4.1.2.13)

**GDH**, Glucose dehydrogenase precursor short protein

**Hem Protease**, hemocyte protease-3

**Or83b**, odorant receptor Or83b

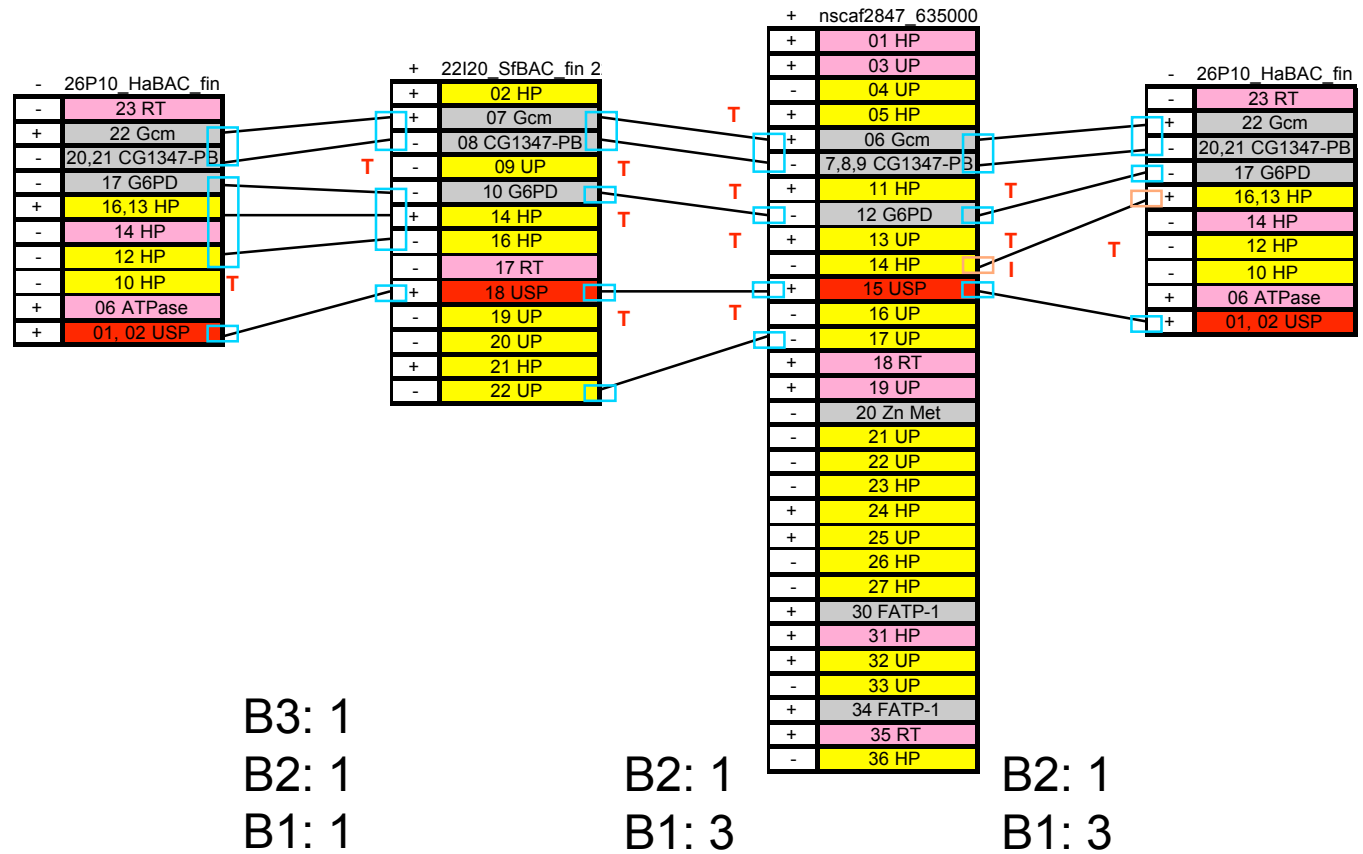
**PP**, phosphoprotein phosphatase (EC 3.1.3.16) X catalytic chain

**RT**, reverse transcriptase family member

**SIR2-4**, NAD-dependent deacetylase sirtuin-4 (SIR2-like protein 4)

\* In *B. mori*, the FBPA genes are located 297 kb away from the Or83b gene in the scaffold

# USP region



**CG1347-PB**, unknown function, nuclear

**FATP-1**, Long-chain fatty acid transport protein 1

**G6PD**, Glucose-6-phosphate 1-dehydrogenase

**Gcm**, Gcm domain bound to DNA (transcription factor required for glial cell differentiation)

**RT**, RNA-directed DNA polymerase

**USP**, Ultraspiracle

**Zn Met**, zinc metalloprotease