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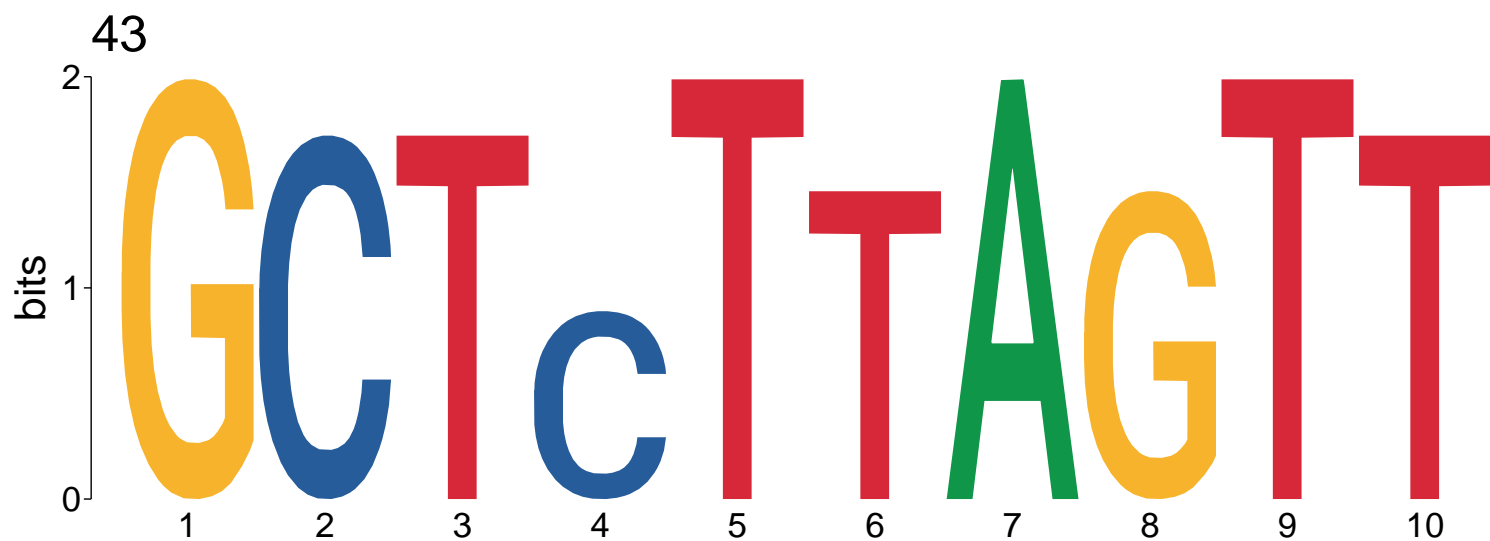
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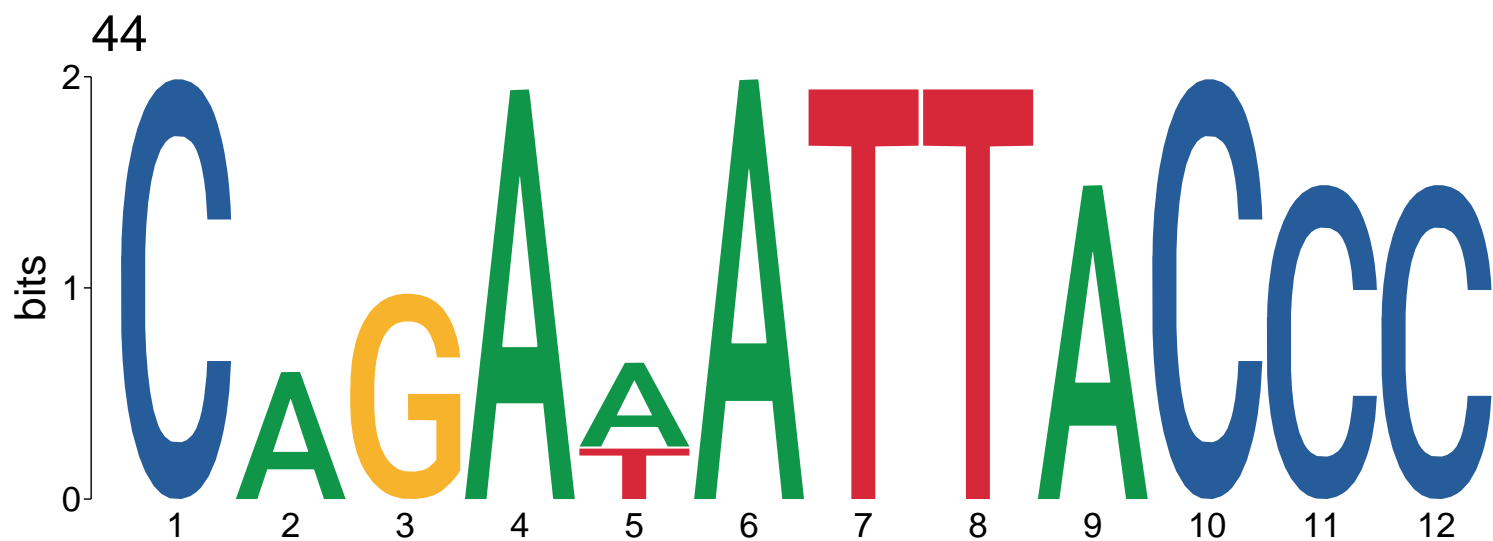
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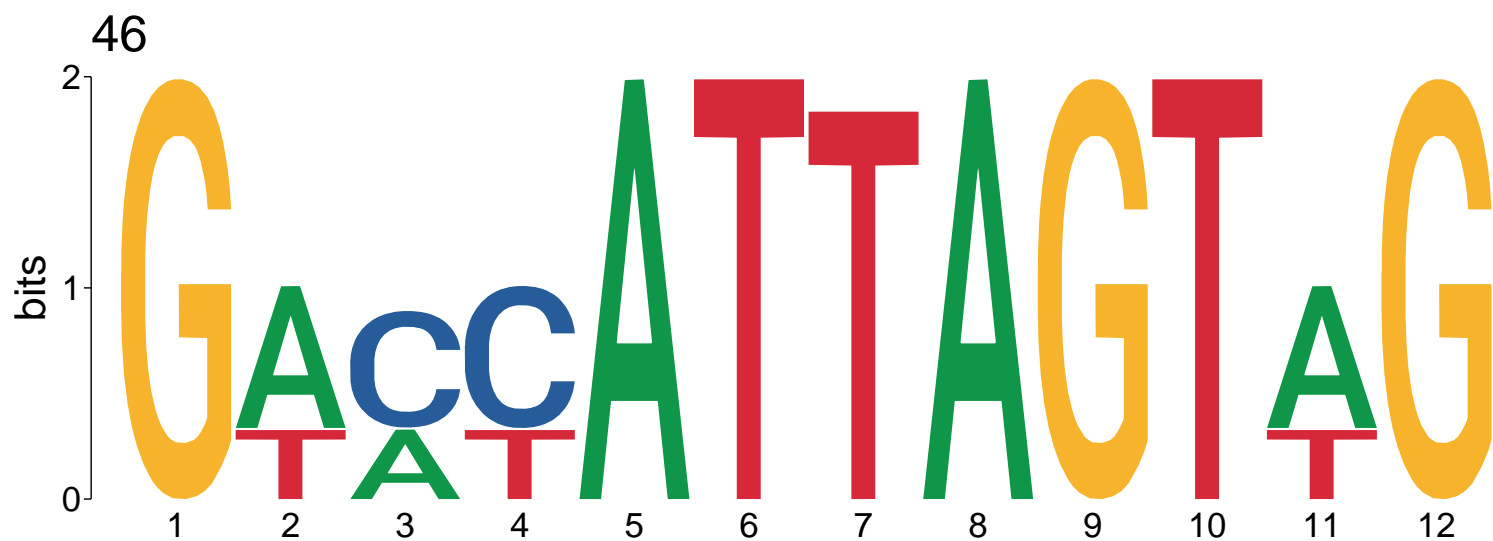
















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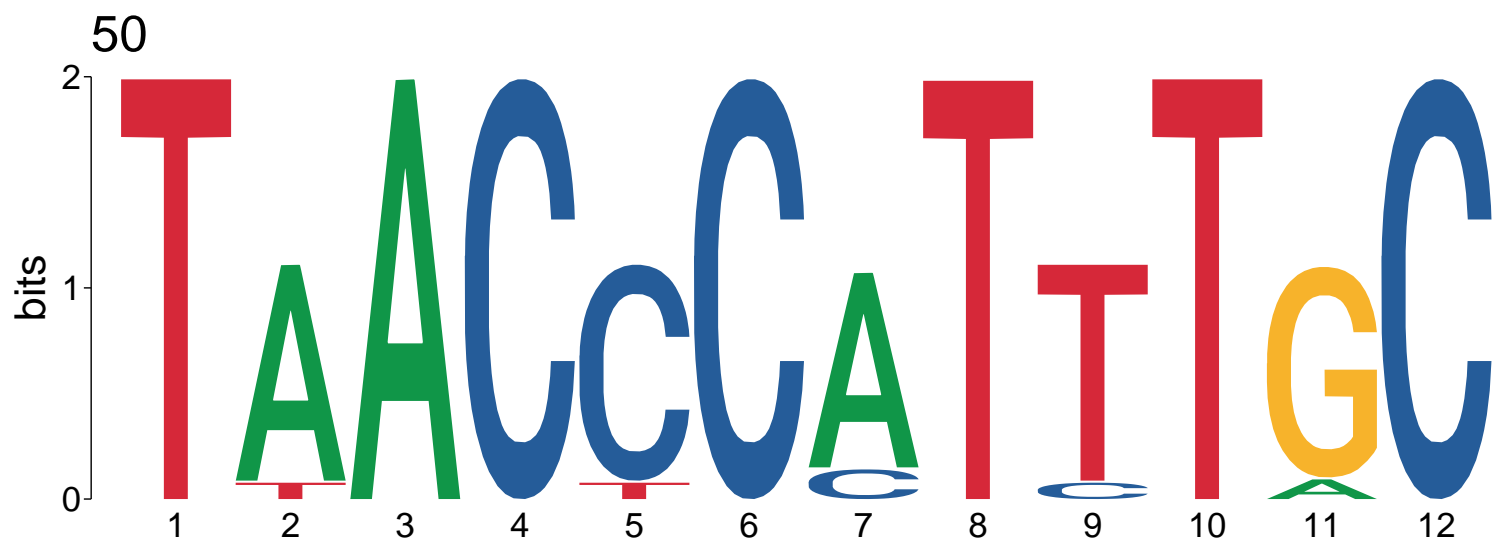
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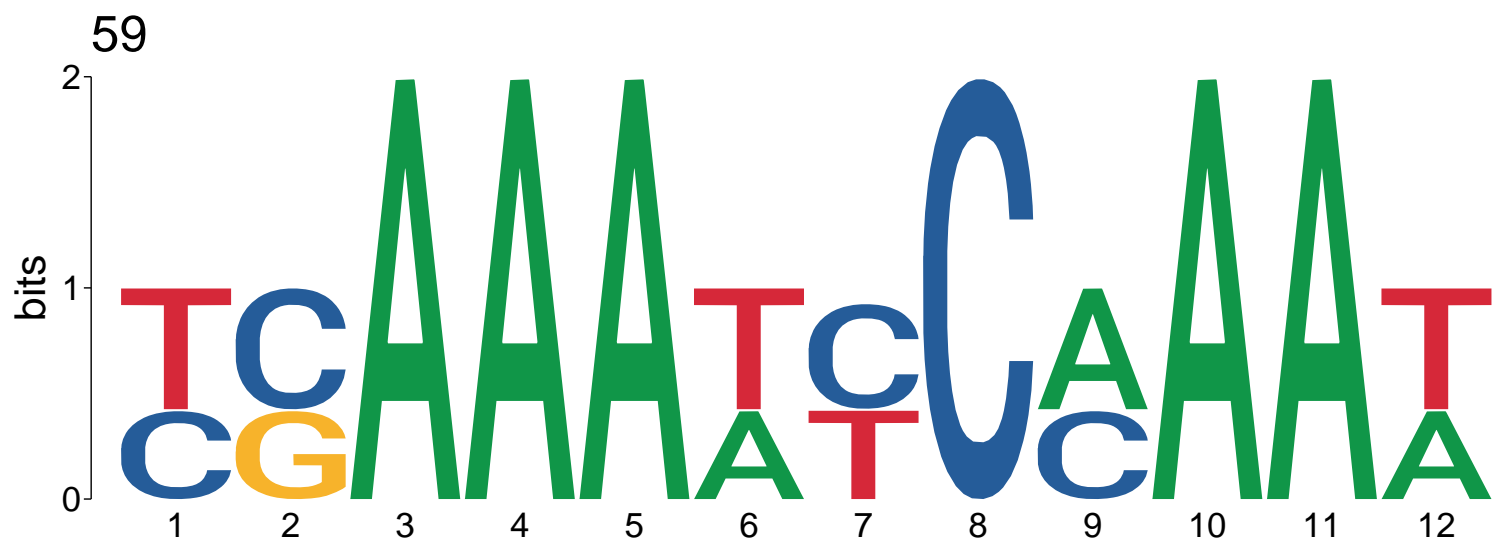


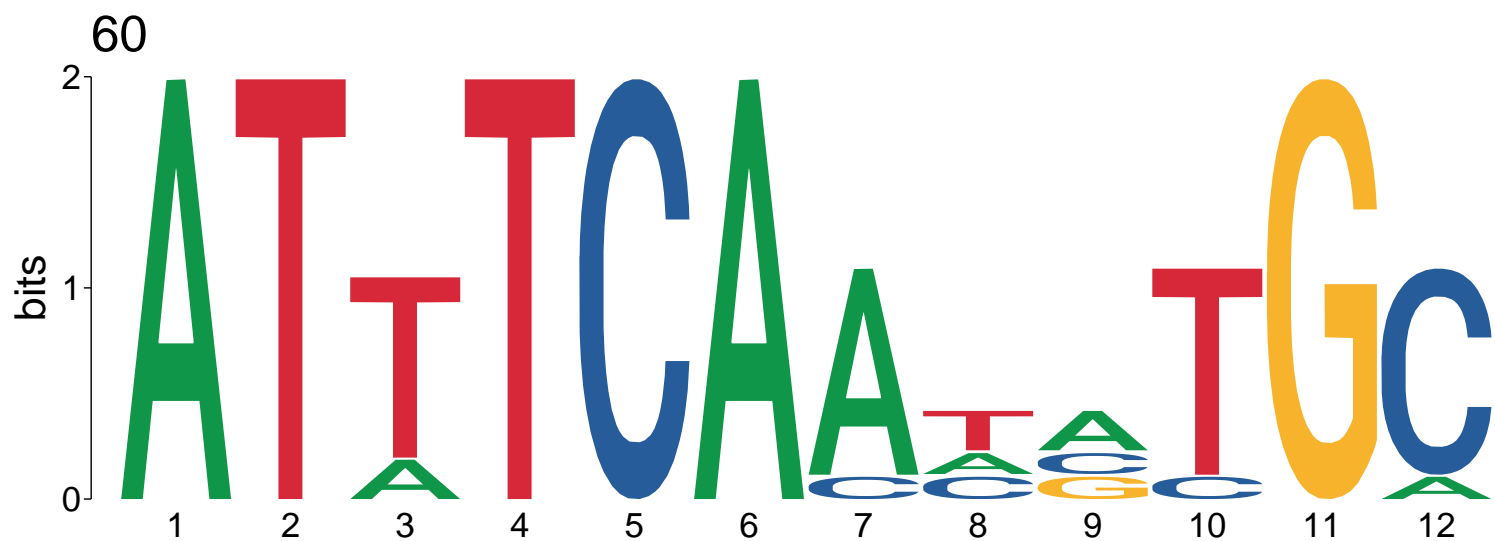




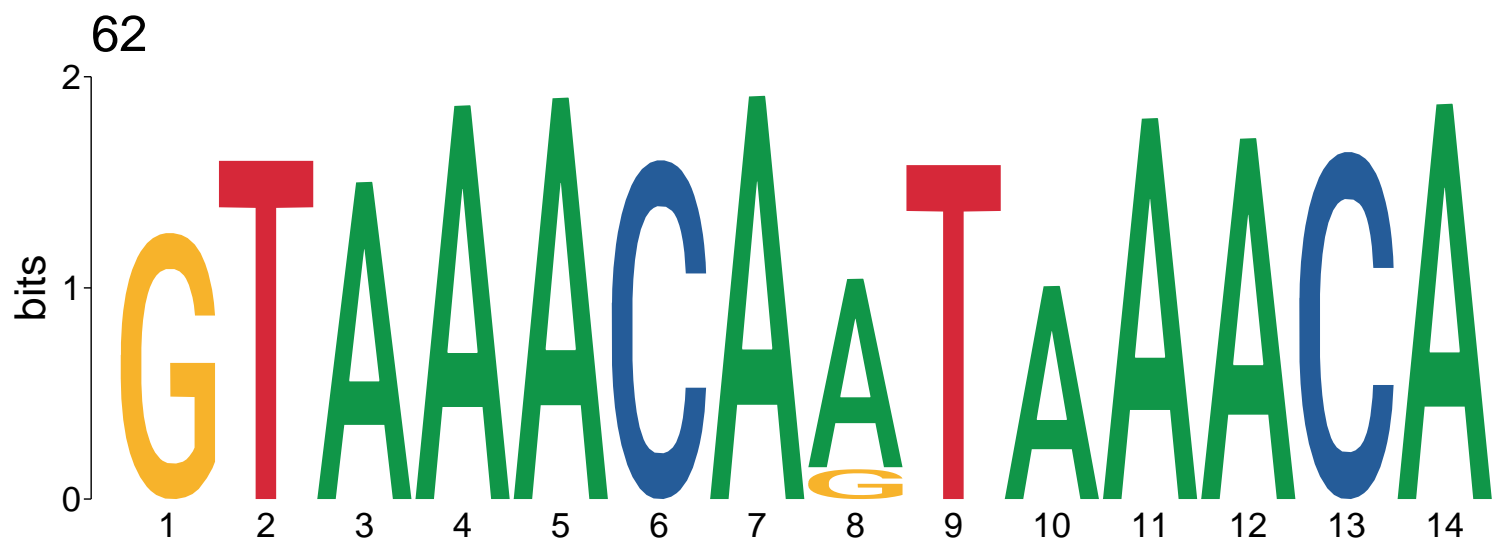






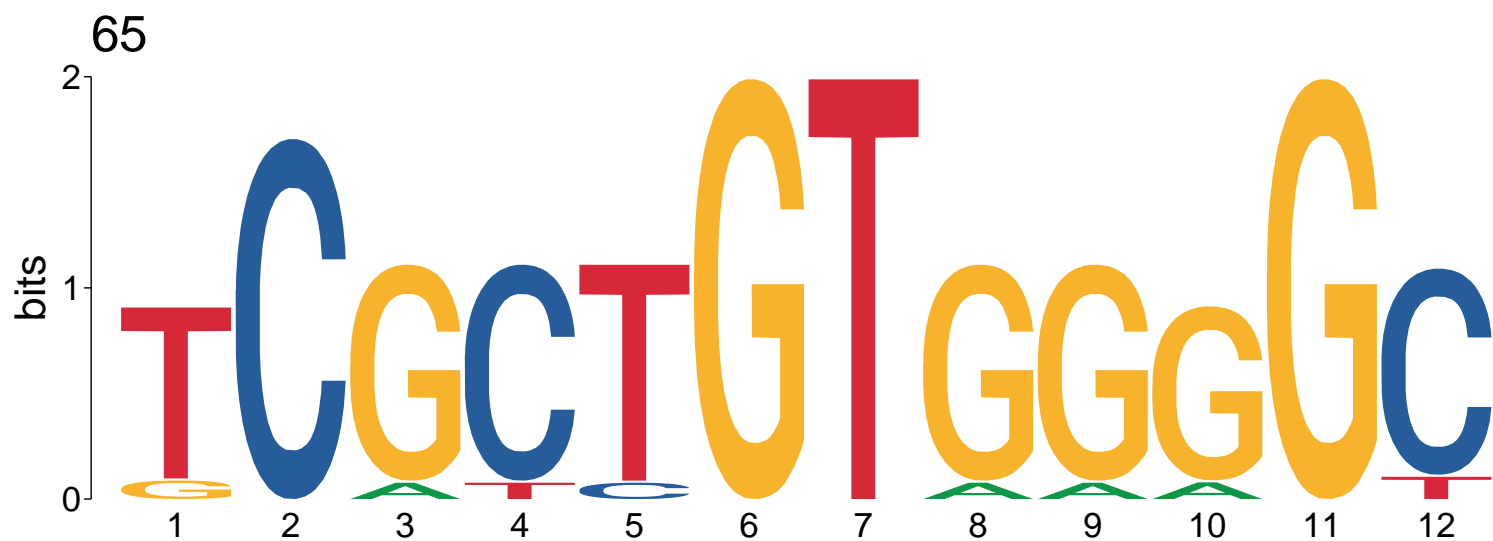




























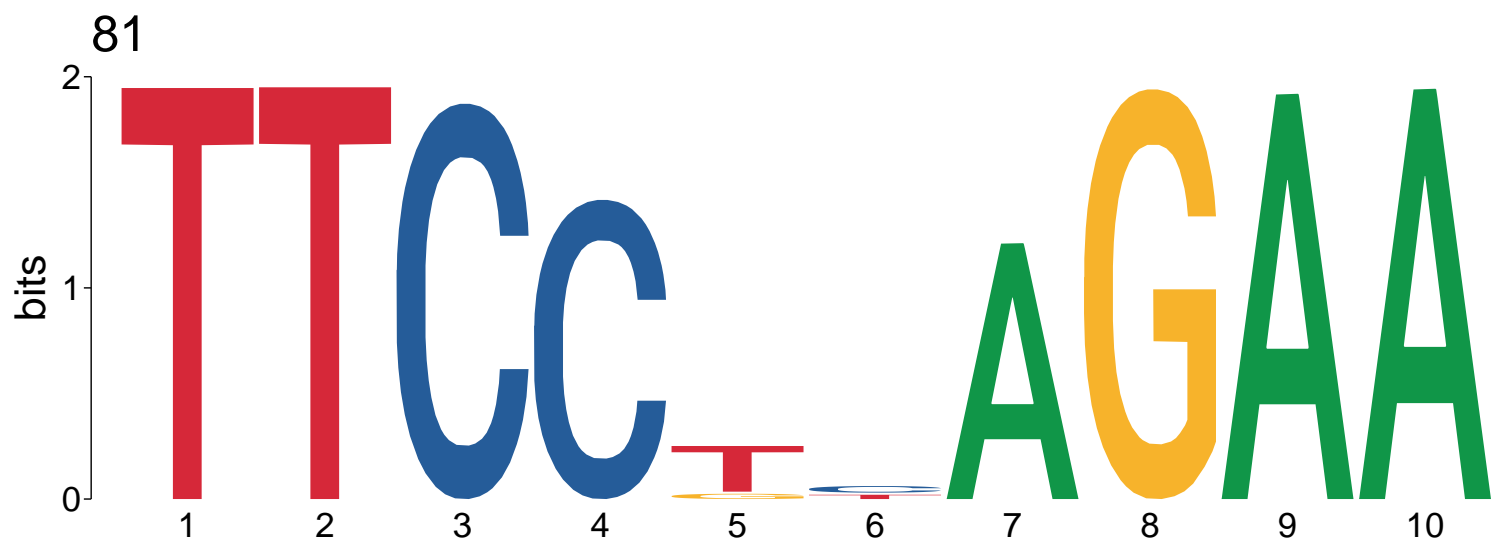








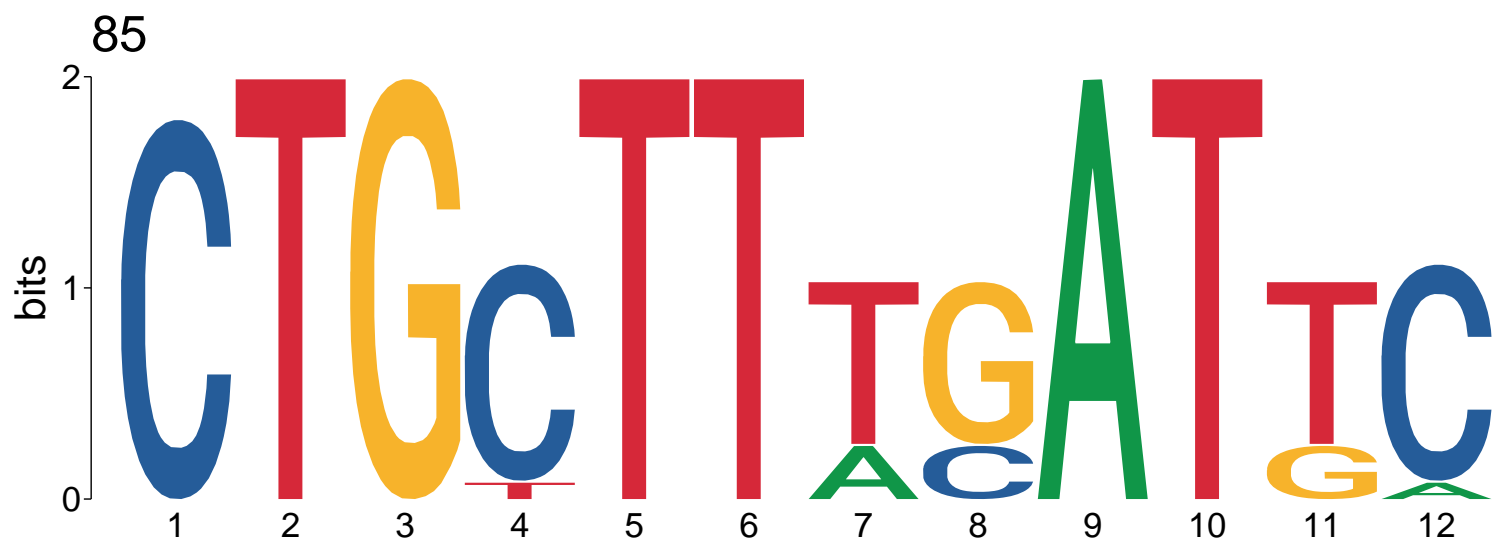














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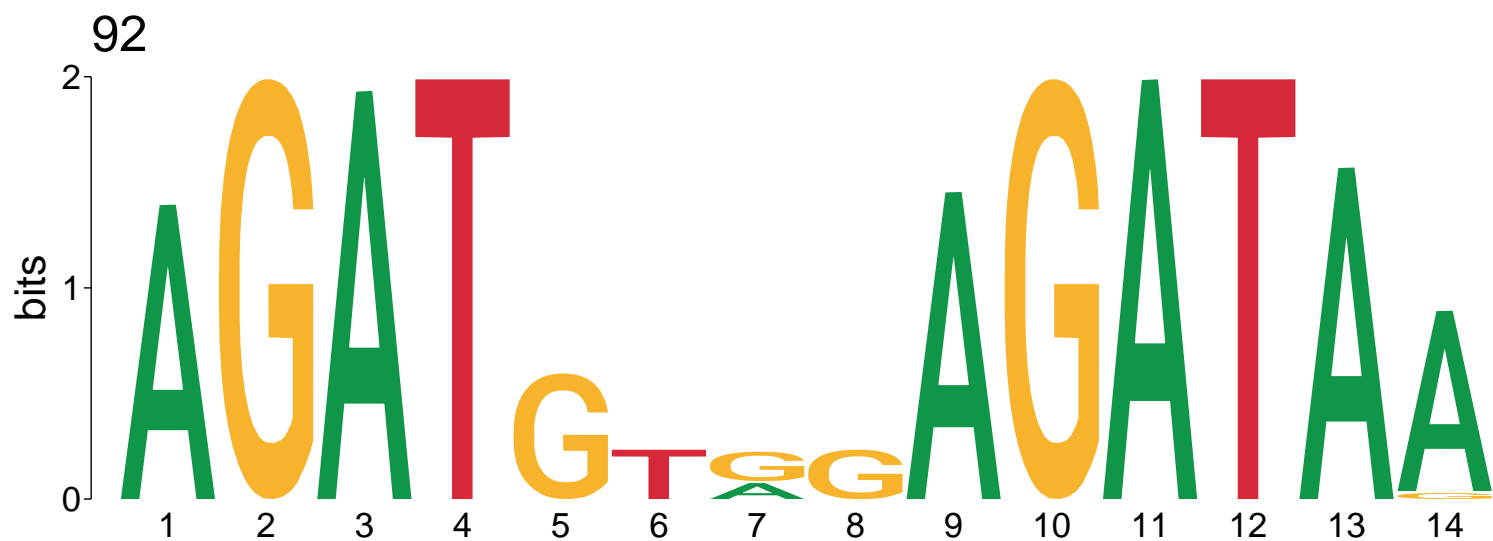
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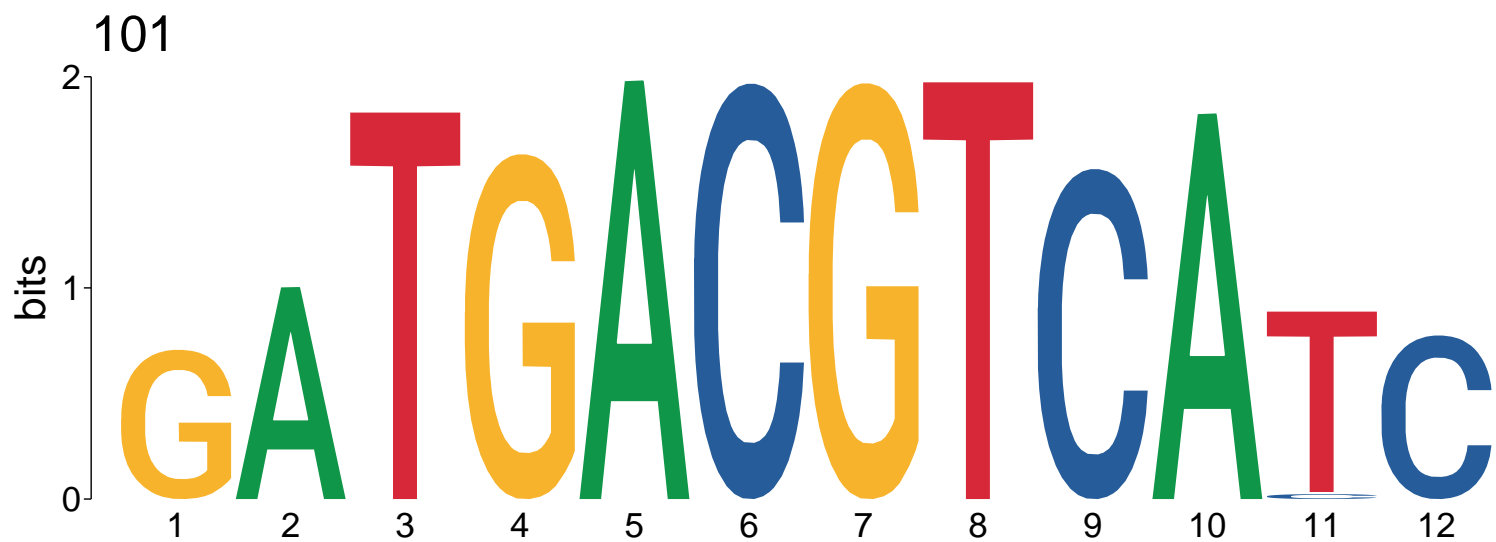




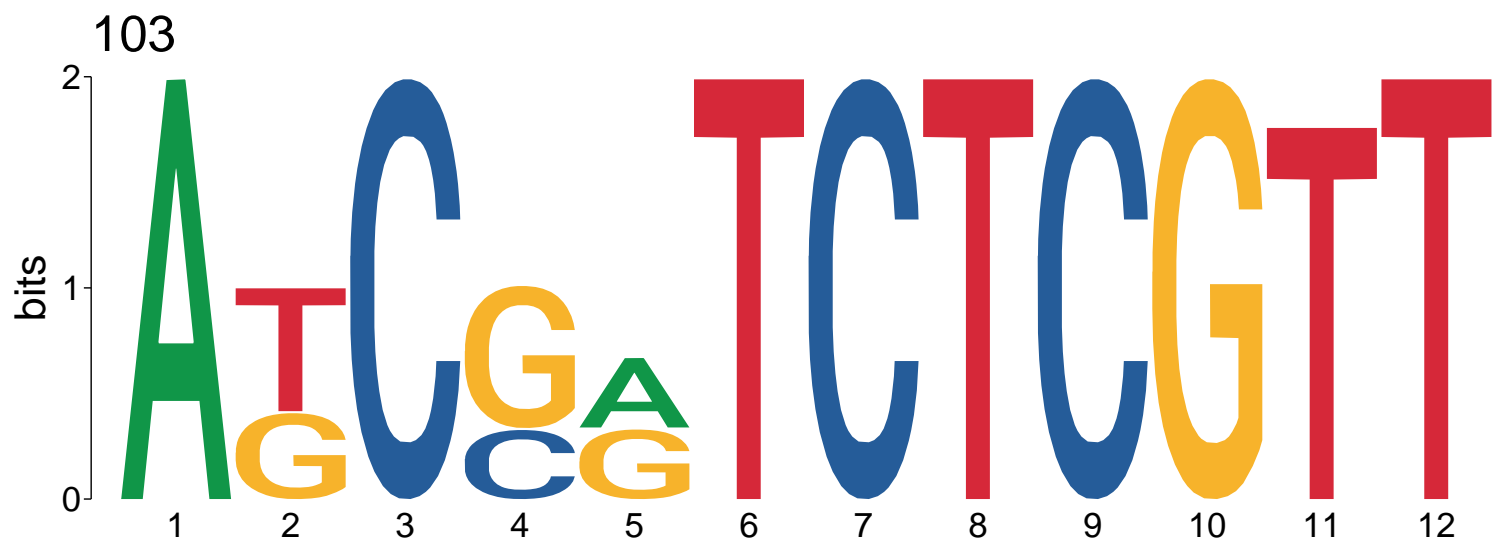




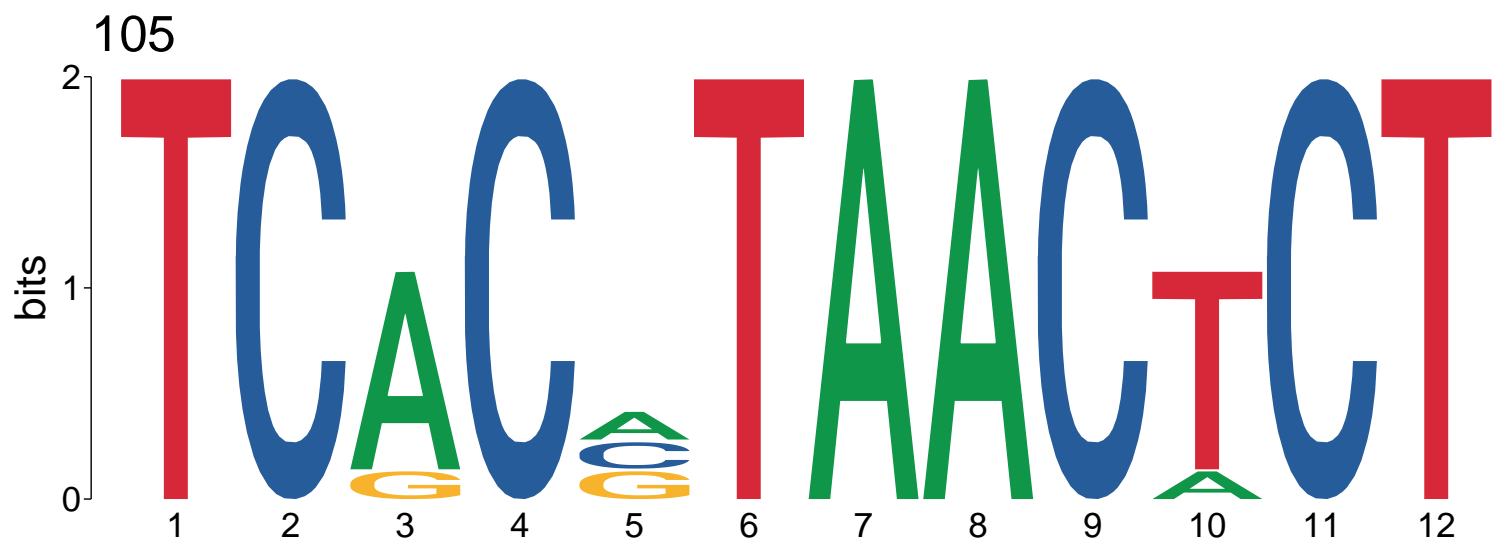


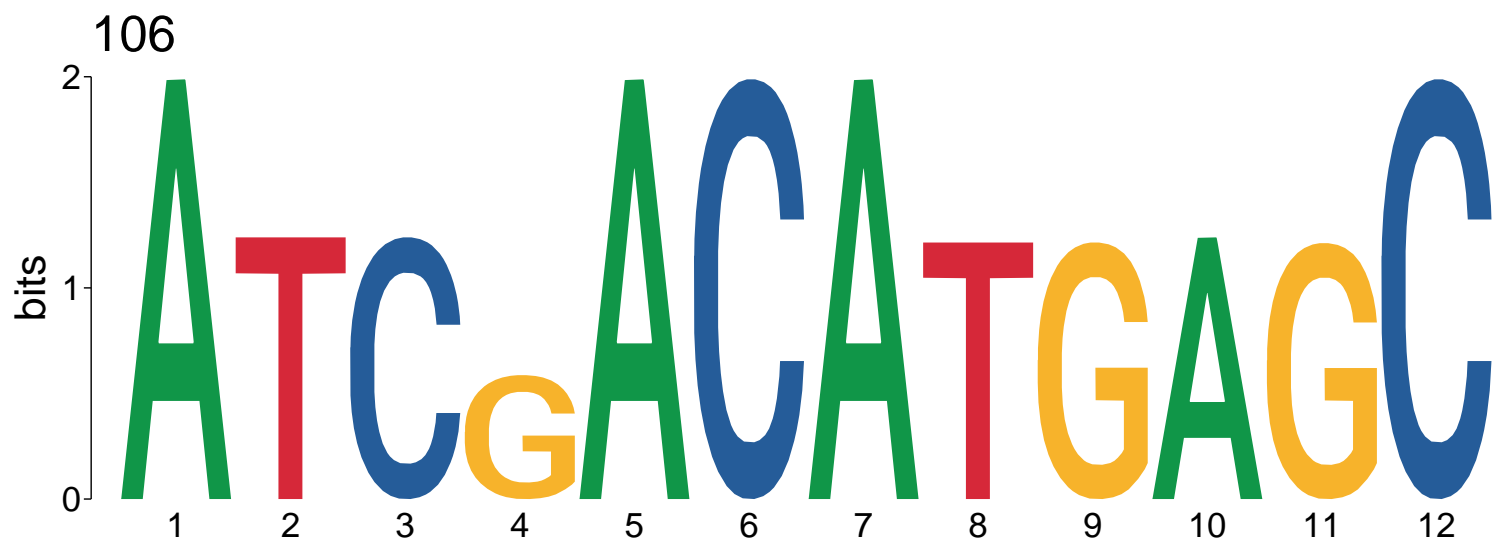


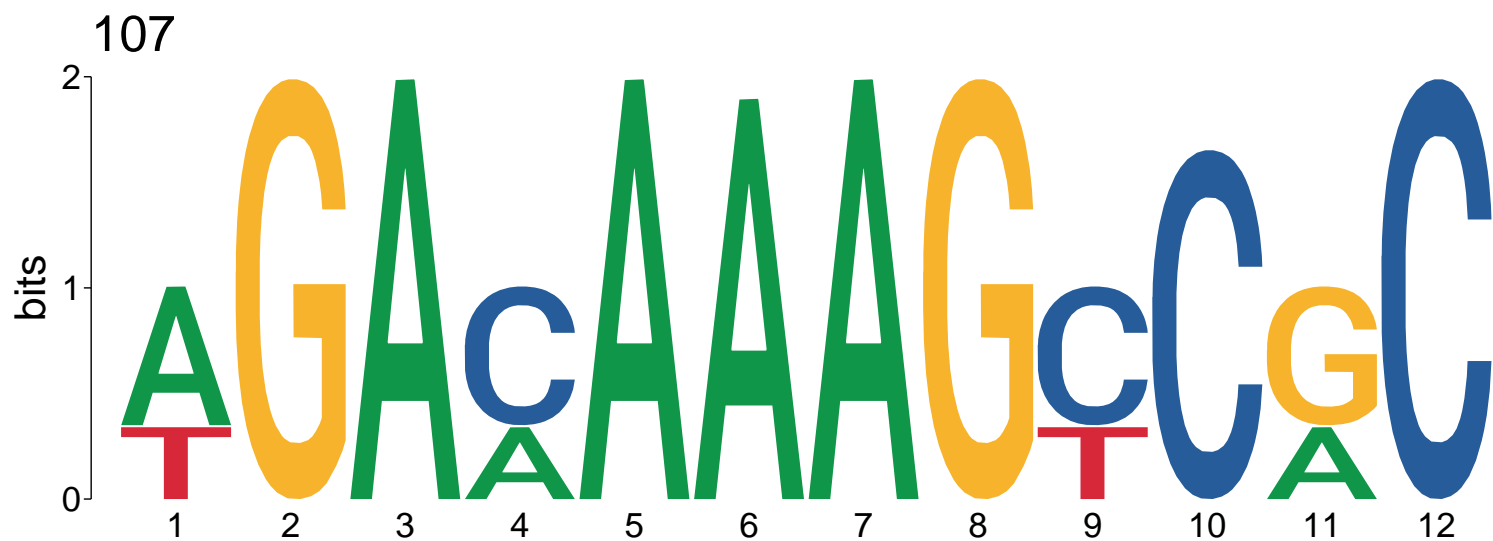
















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113

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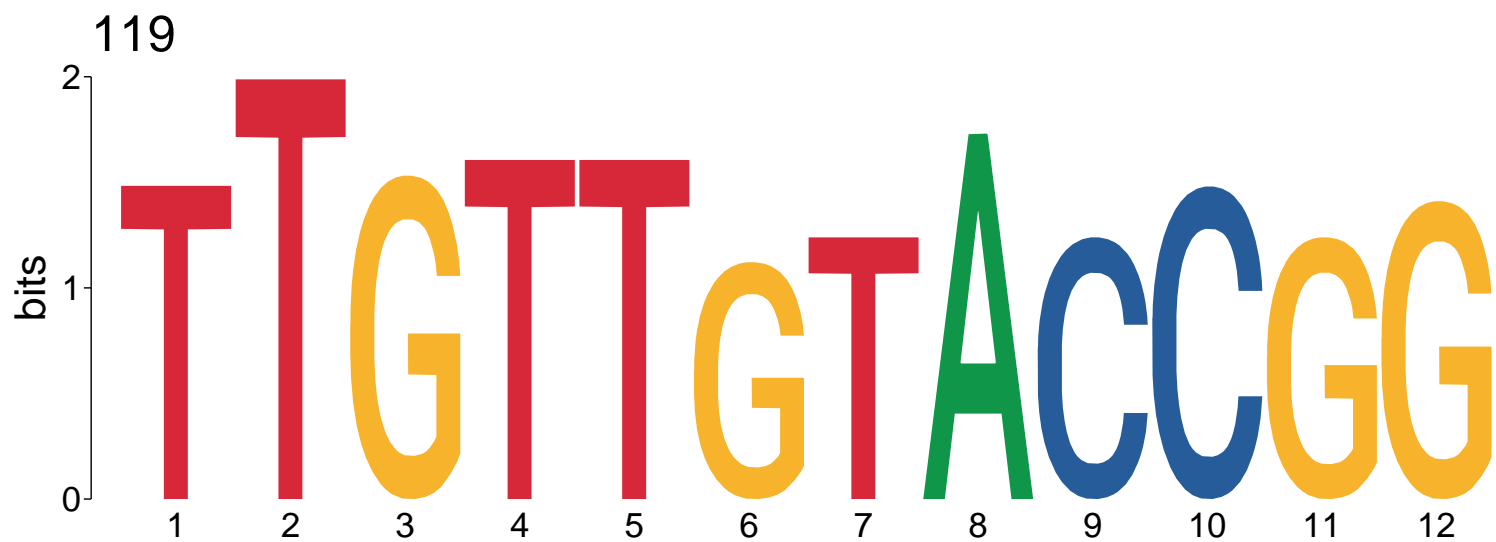
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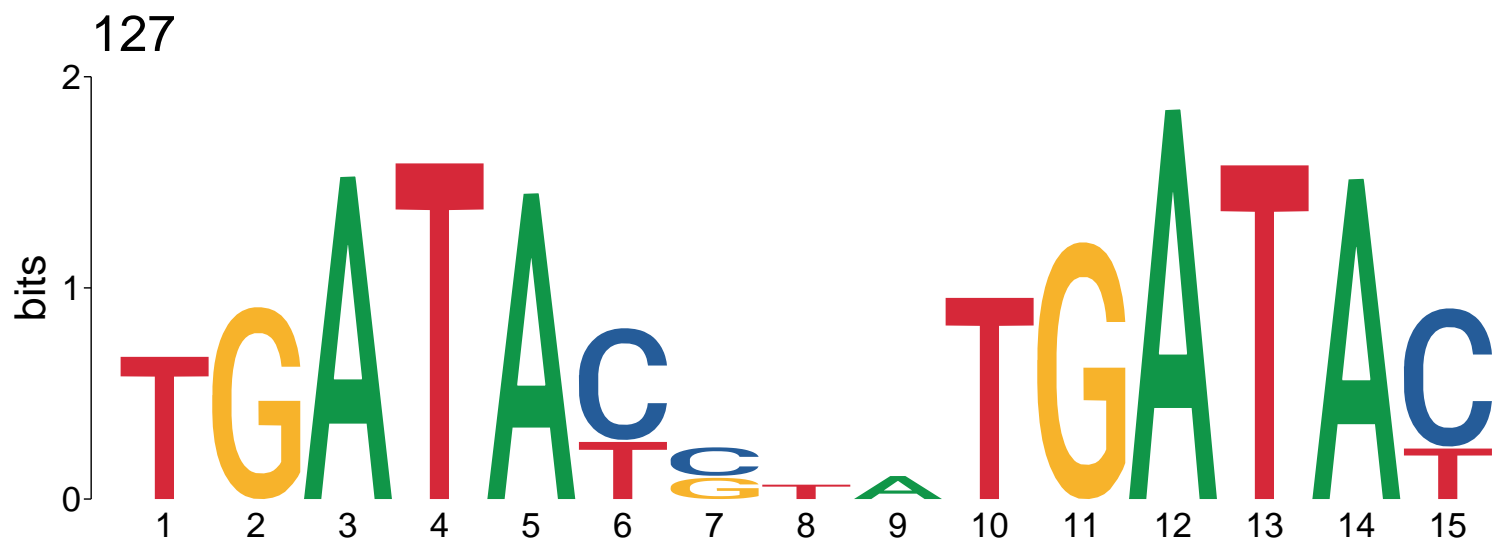
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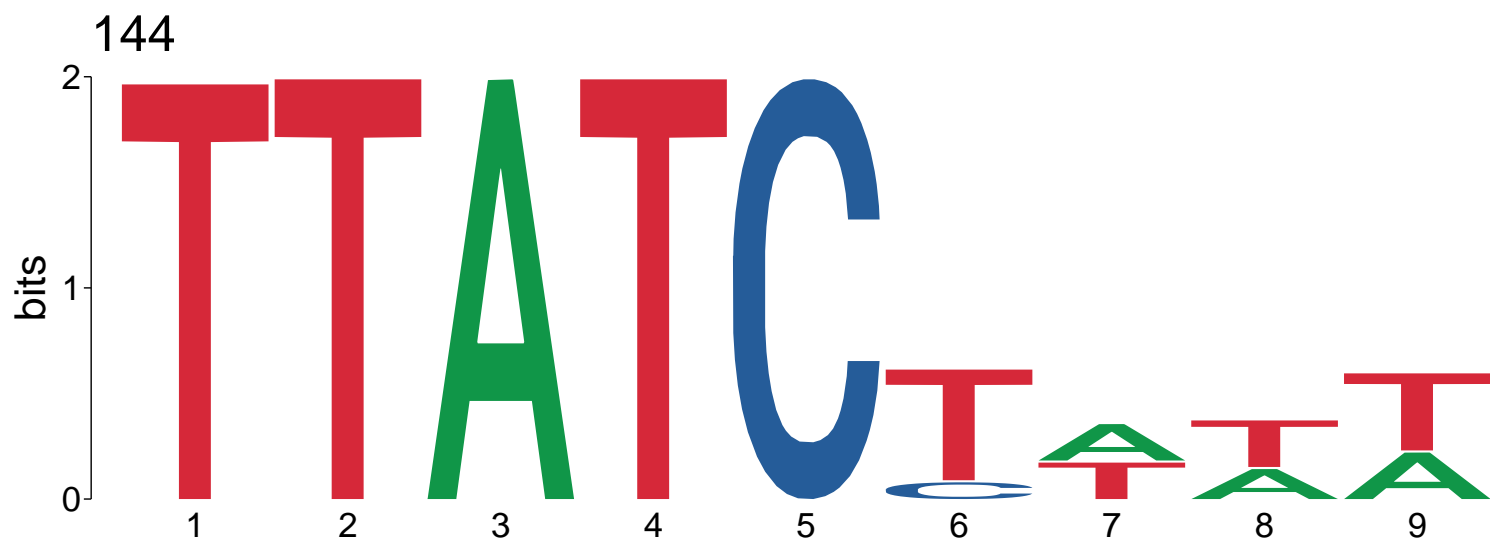
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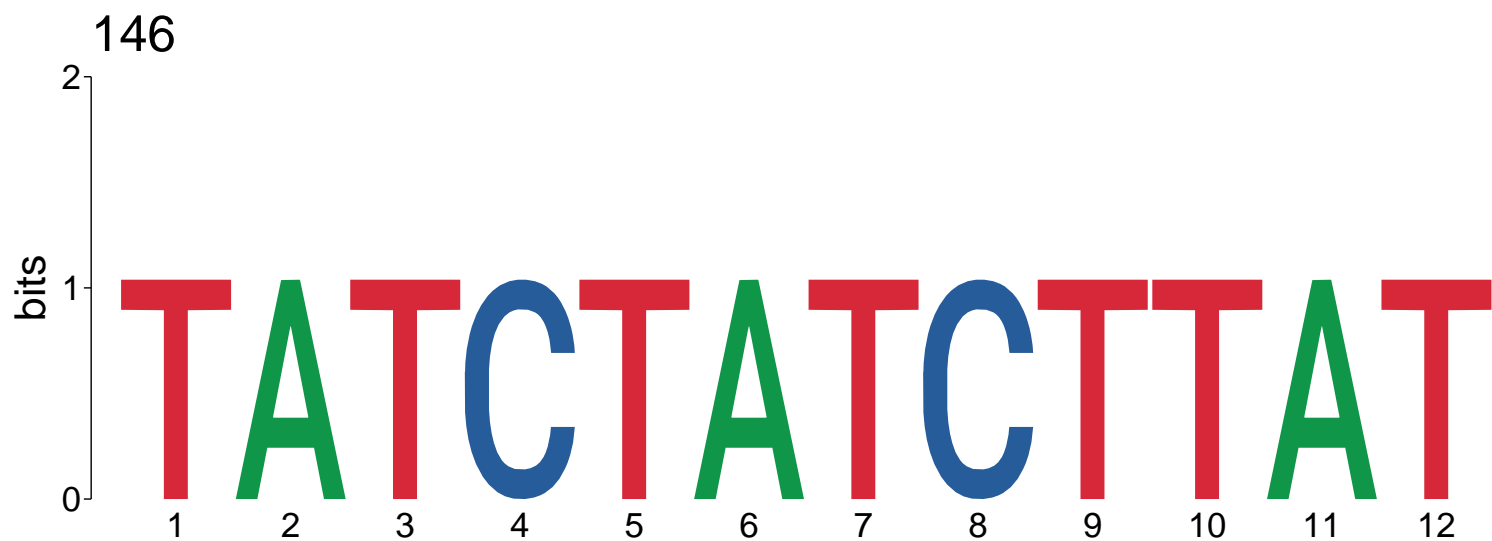
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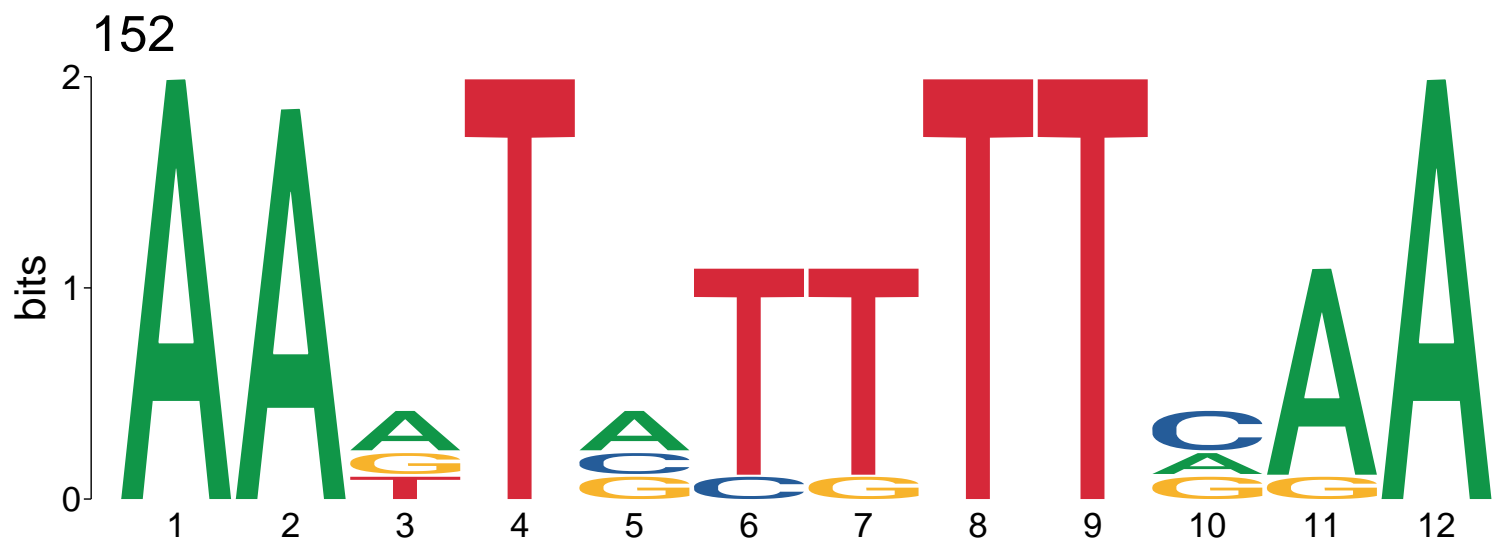
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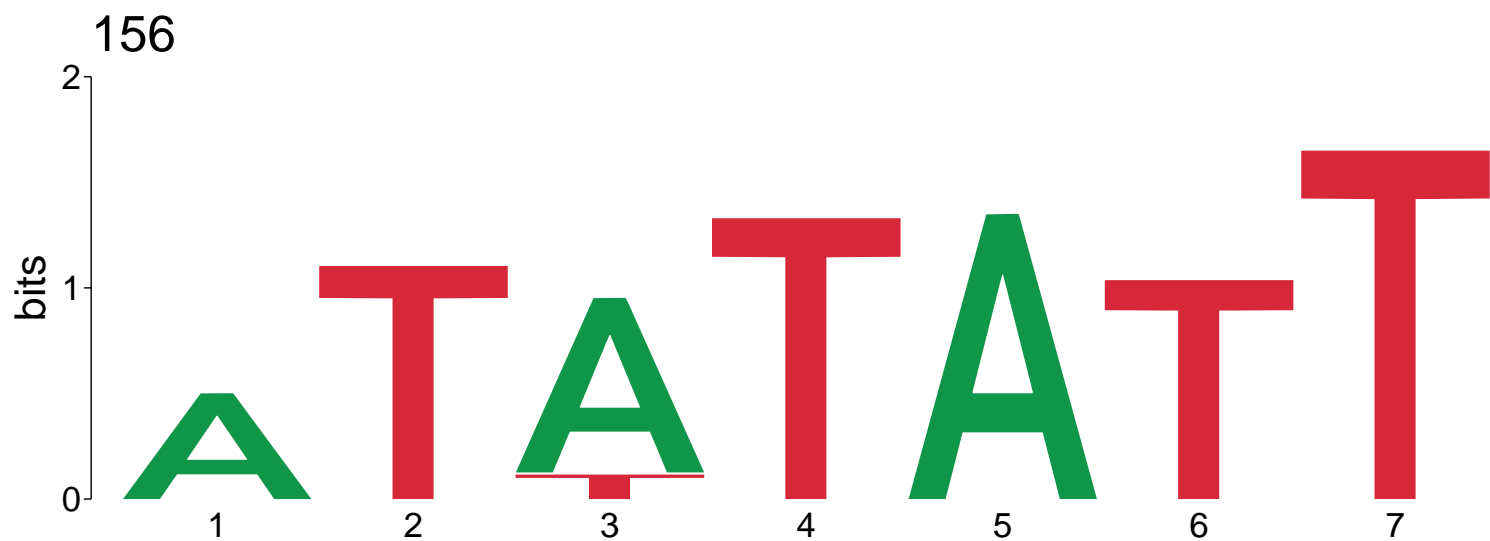
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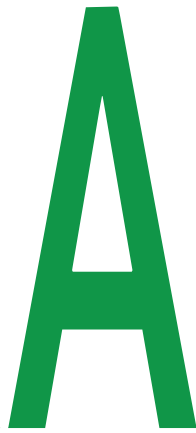
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173

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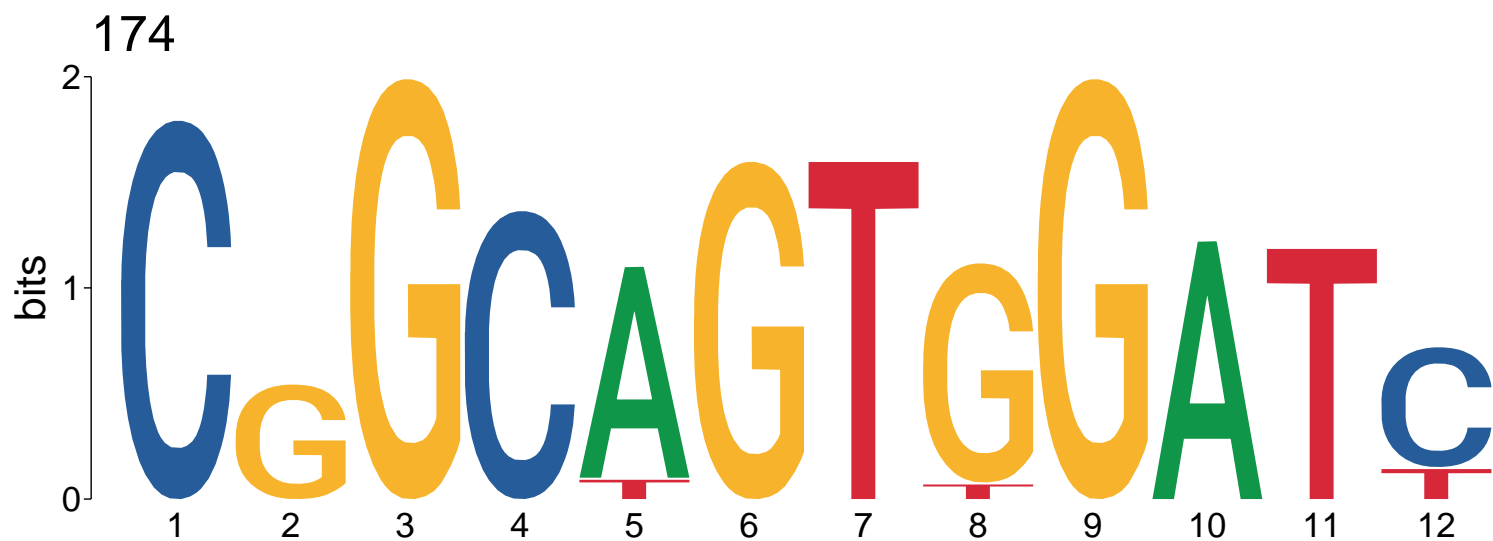
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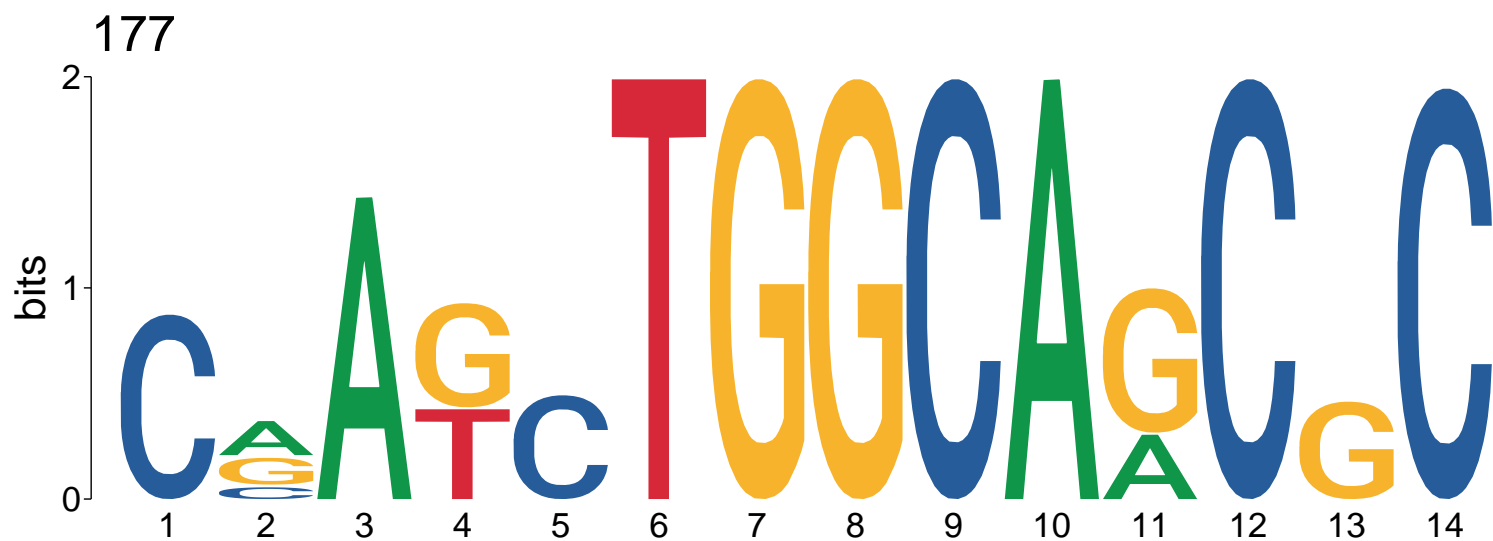
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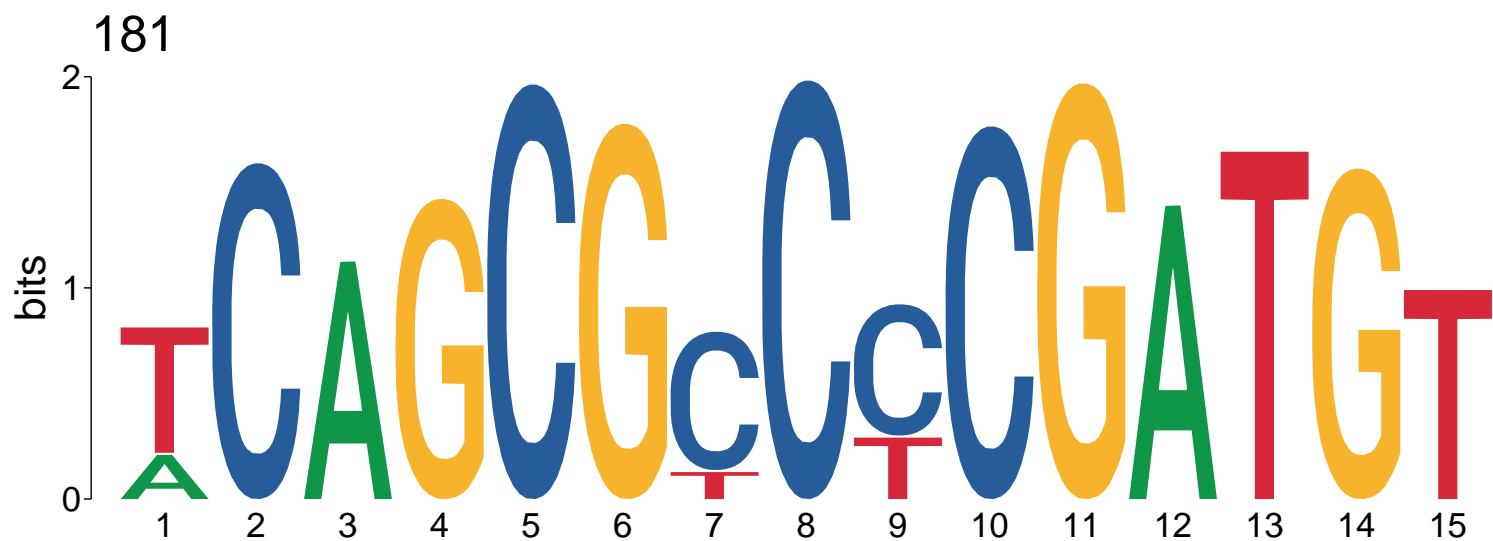
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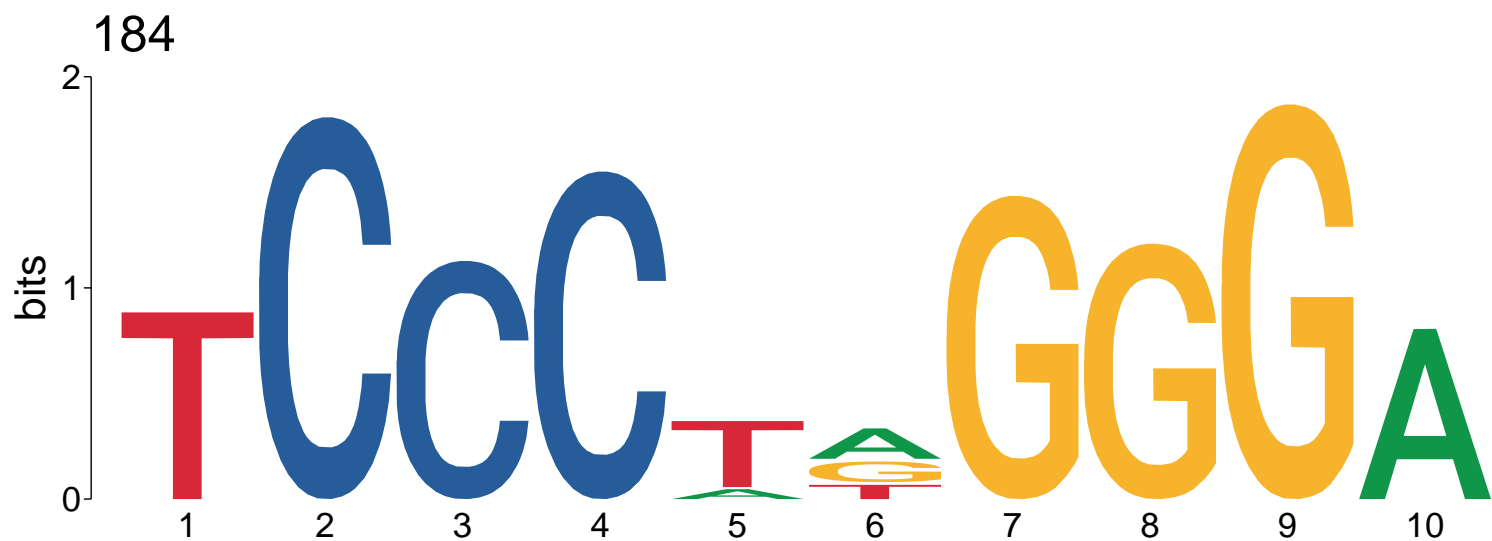
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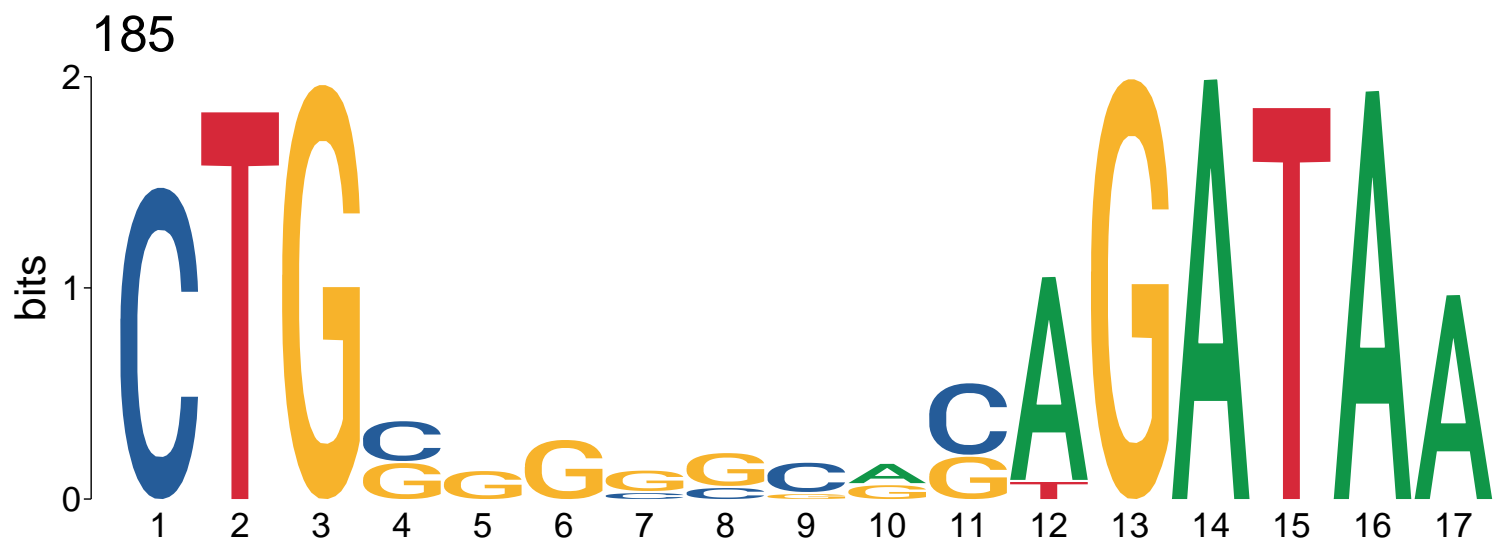
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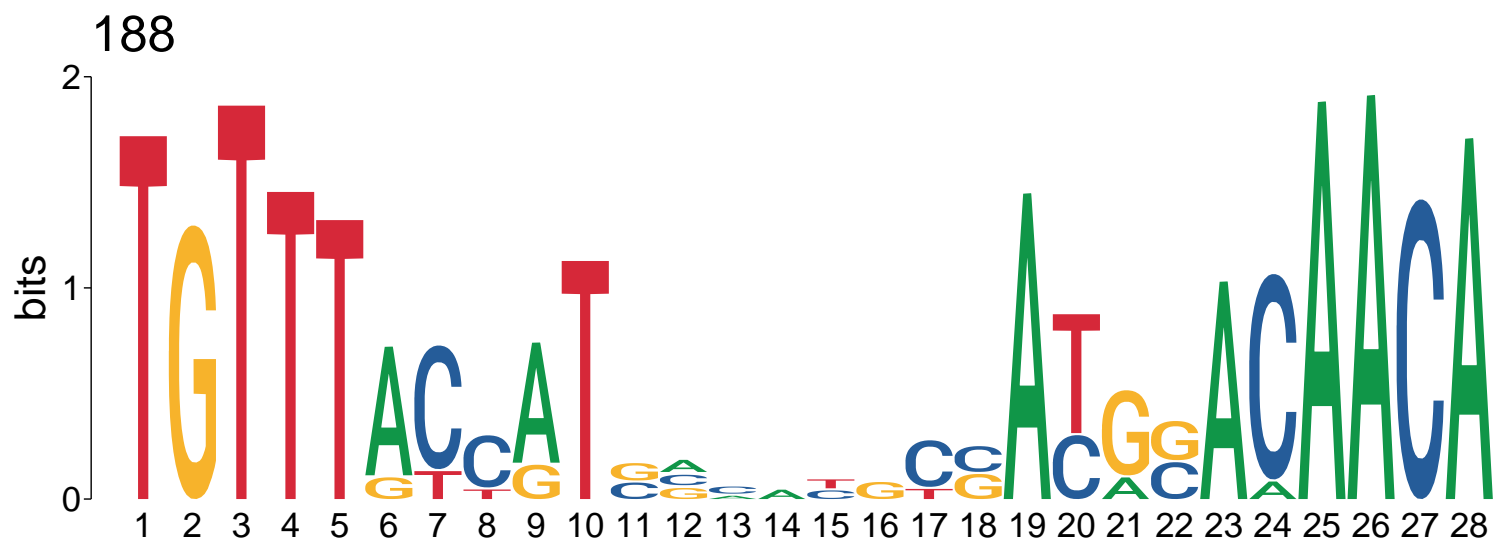
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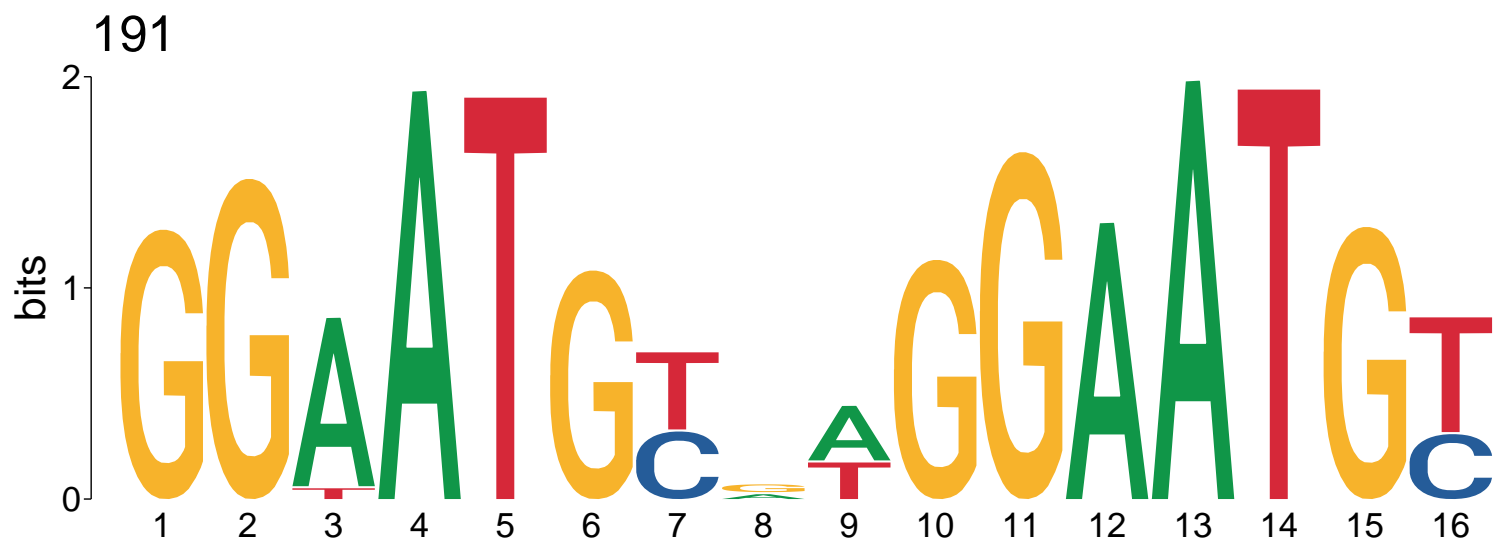
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193

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196

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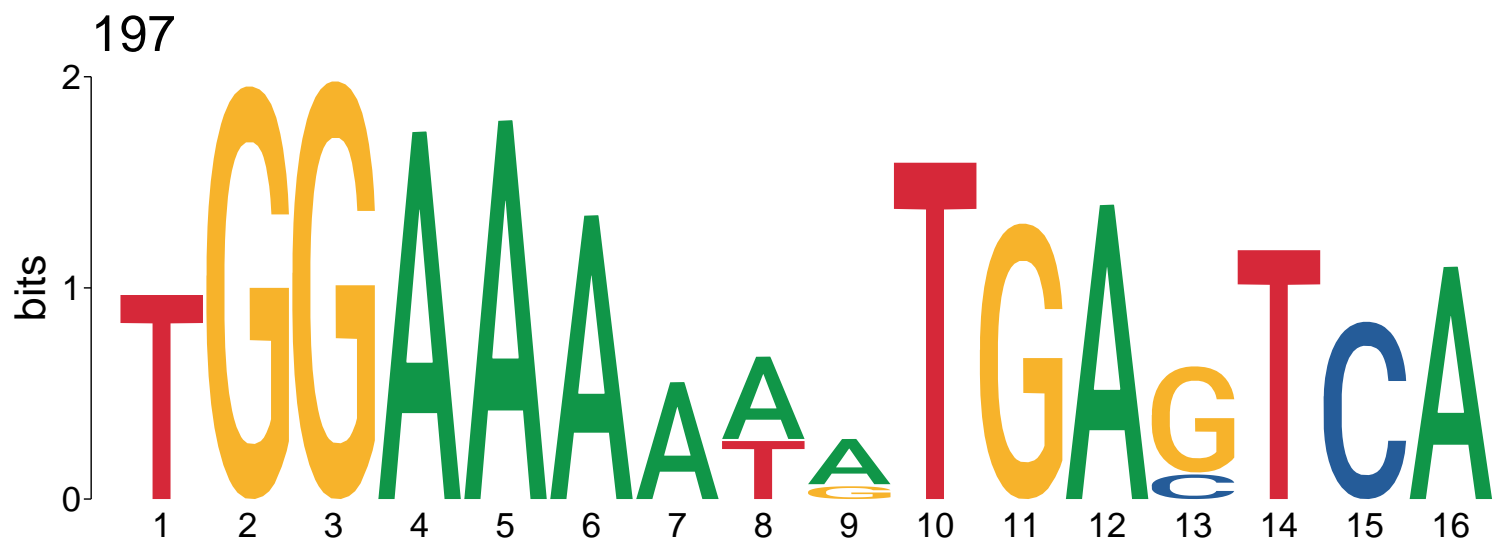
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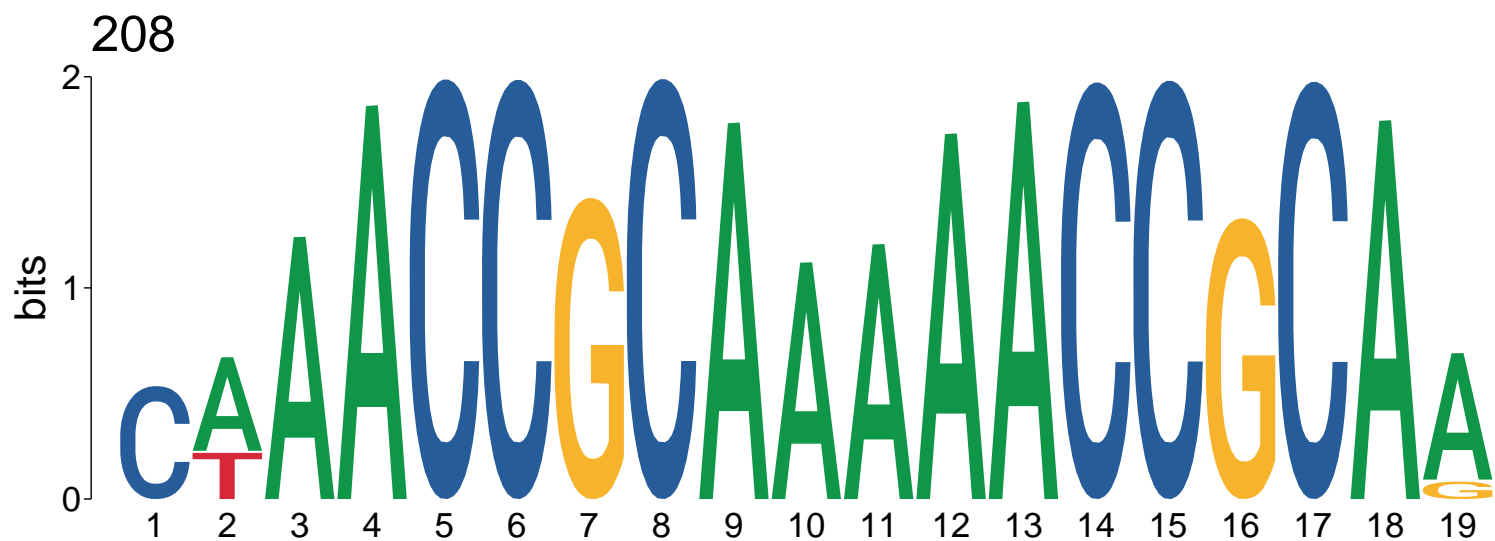
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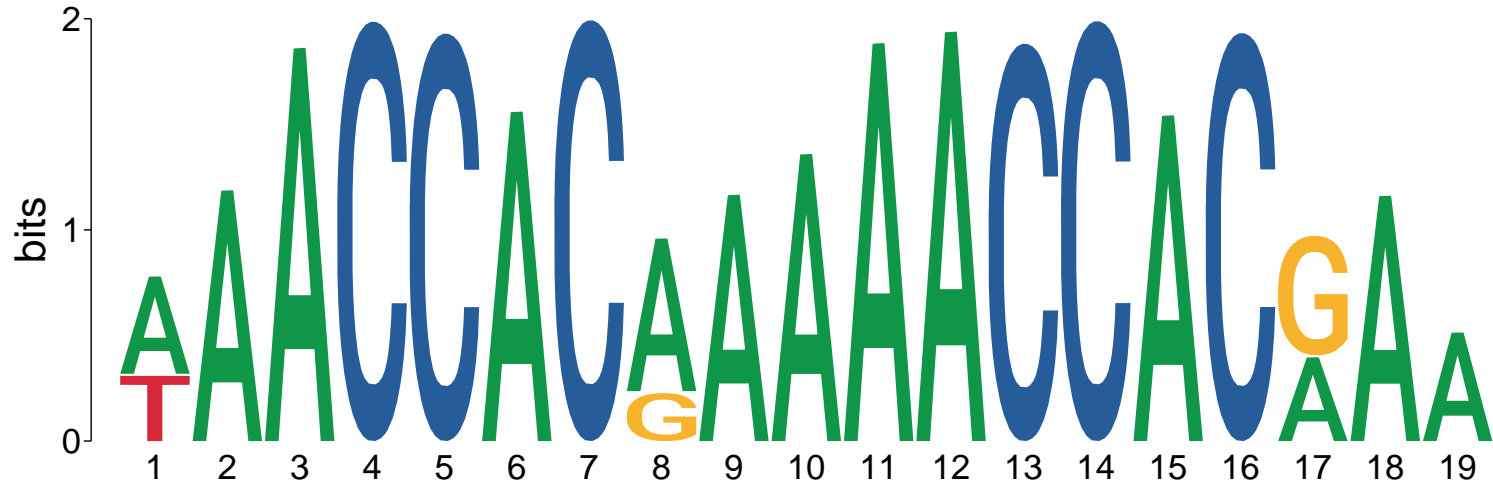
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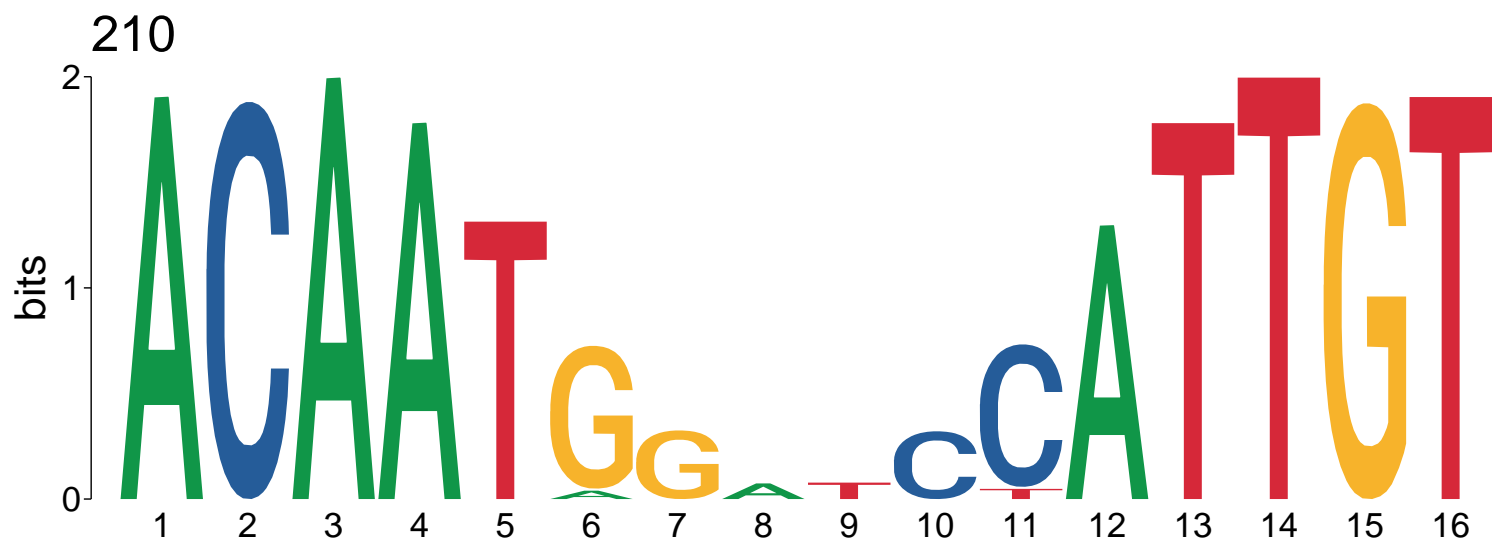
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218

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bits

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CC

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CC

CC

cc

cc

219

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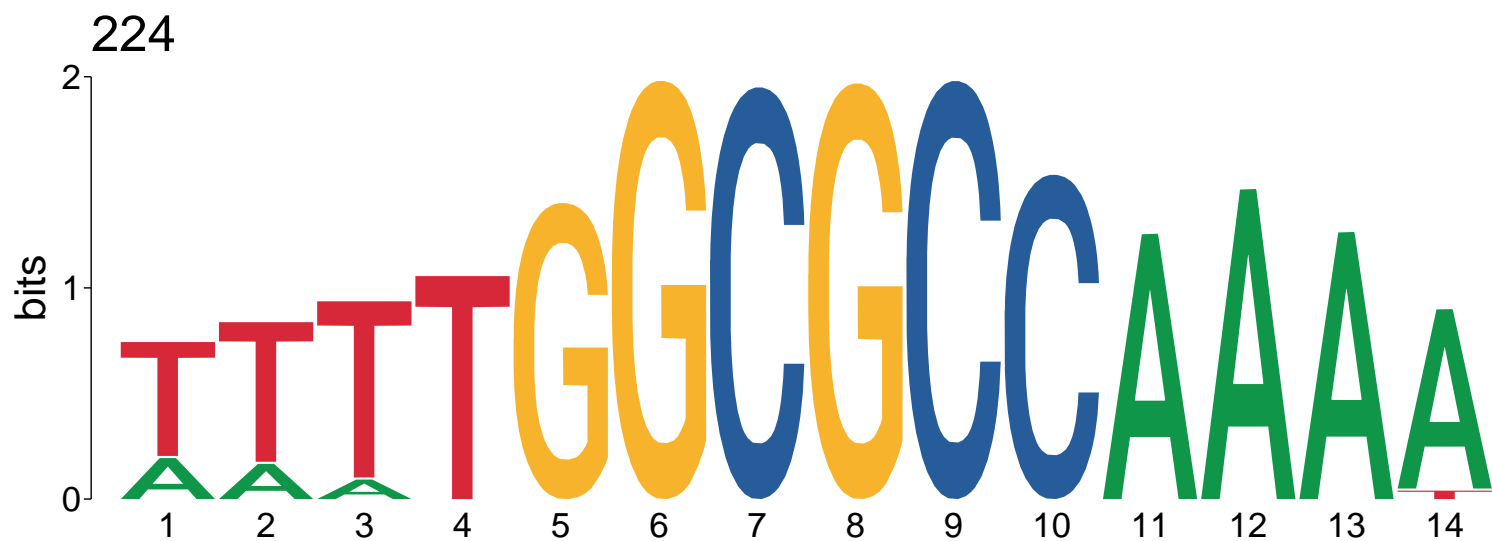
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236

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237

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c c T c c c c c T G

238

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bits

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239

2

1

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bits

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242

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bits

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A G G A G A G A G A A

243

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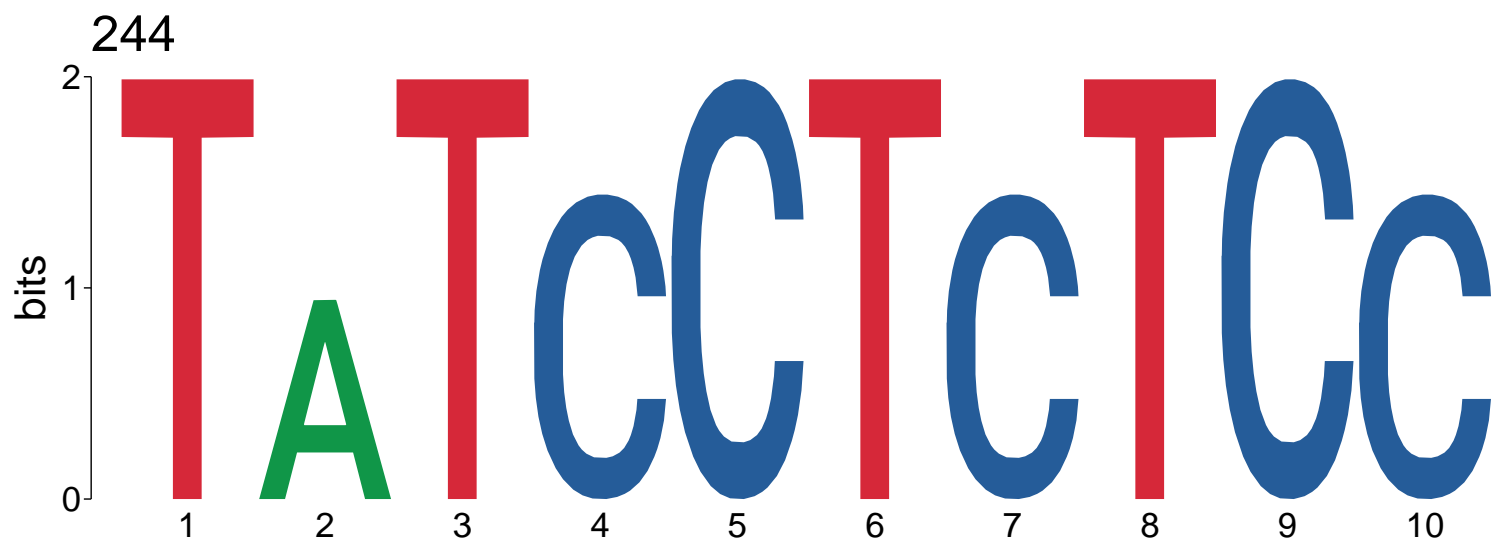
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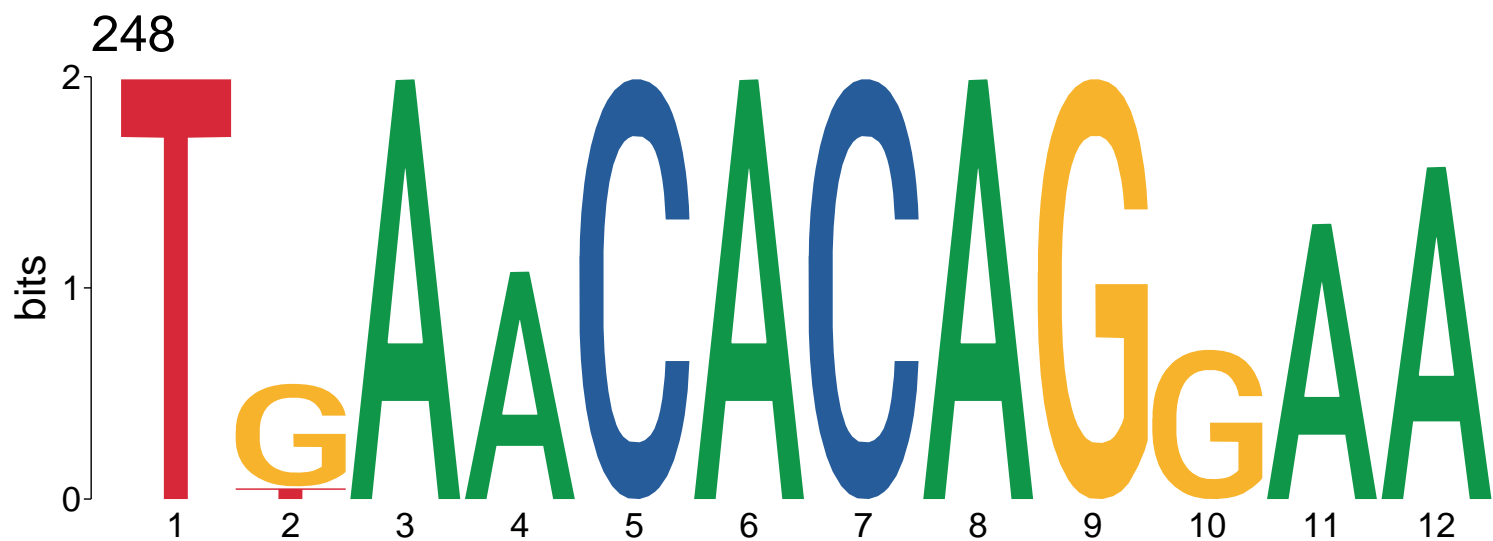
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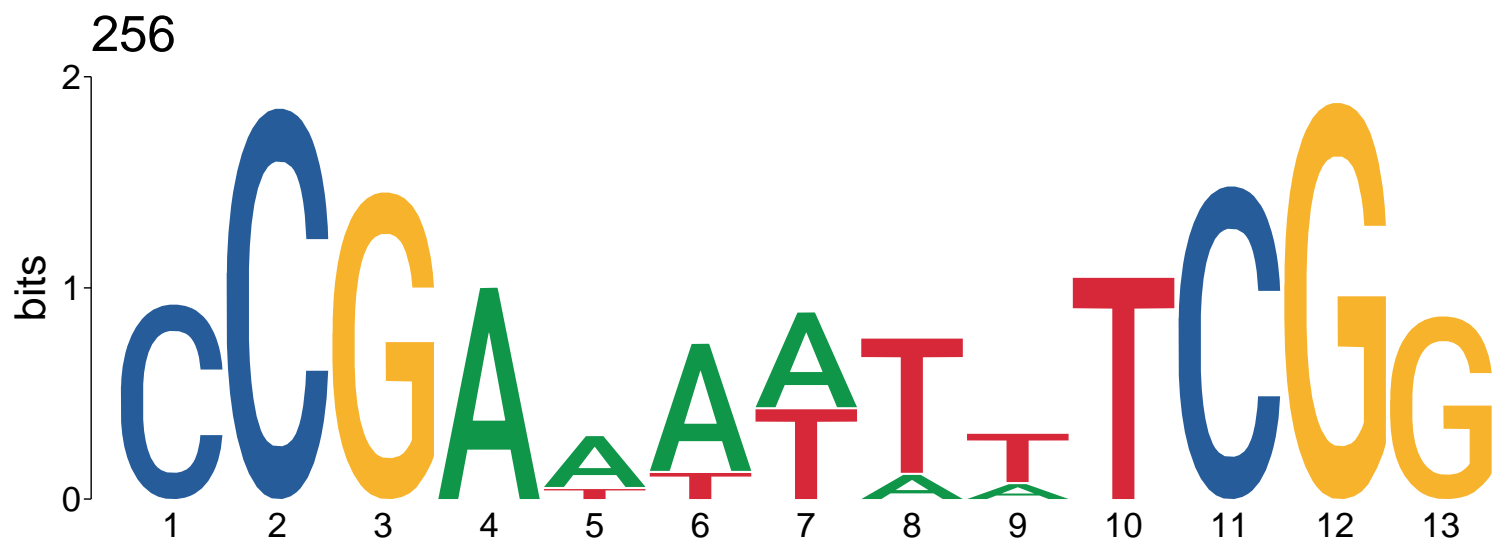
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AAGAAATAGGA

261

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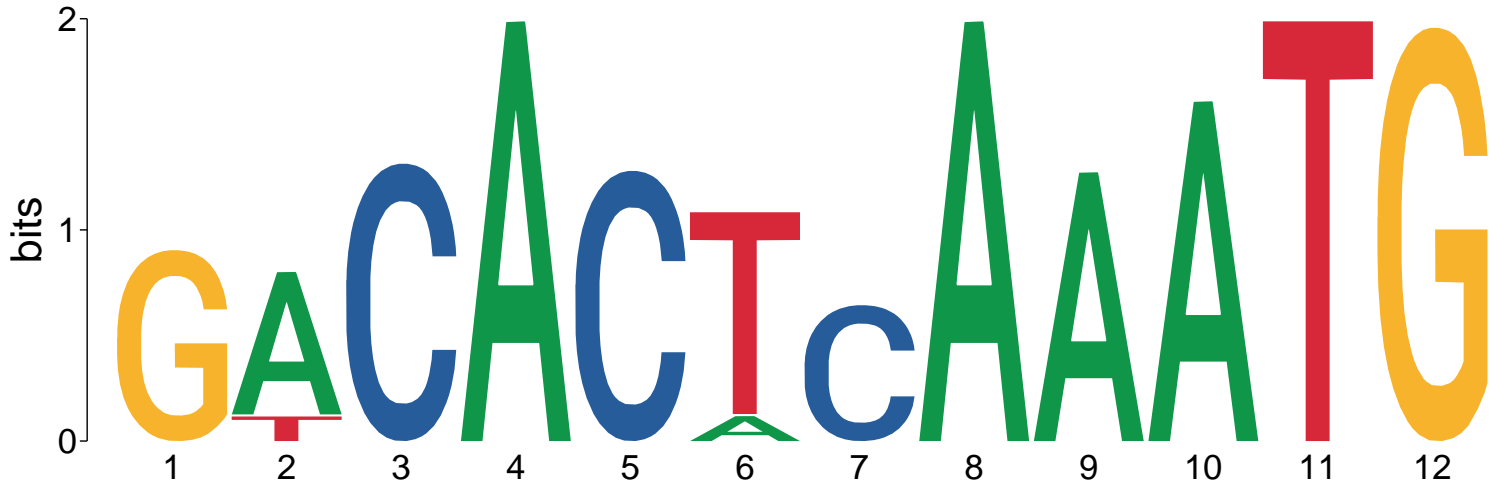
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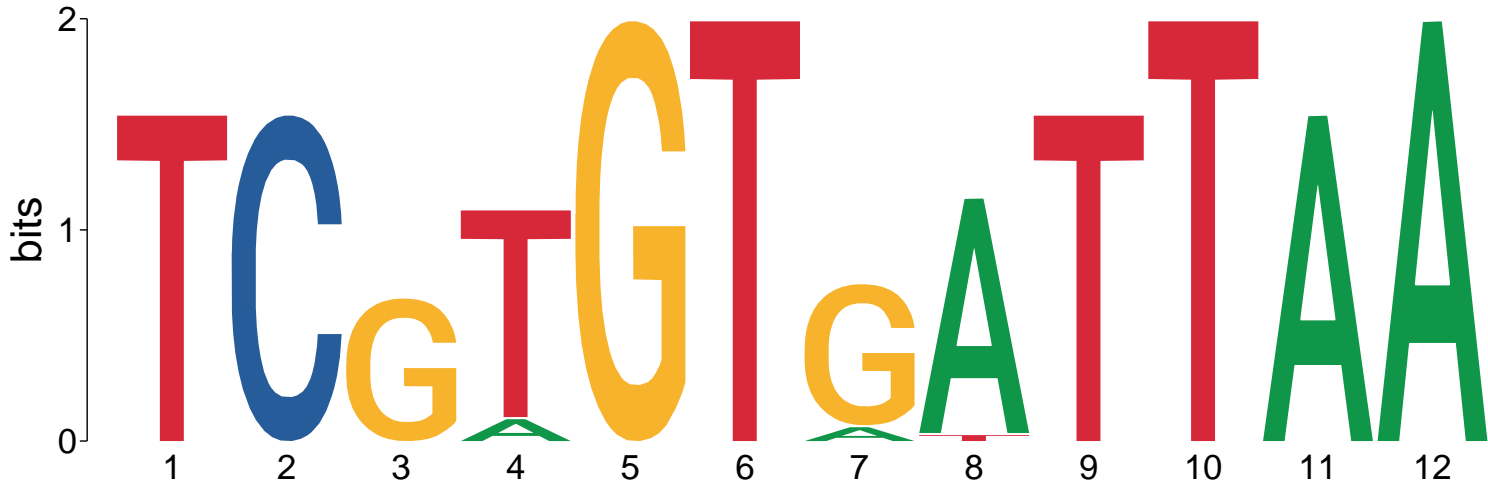
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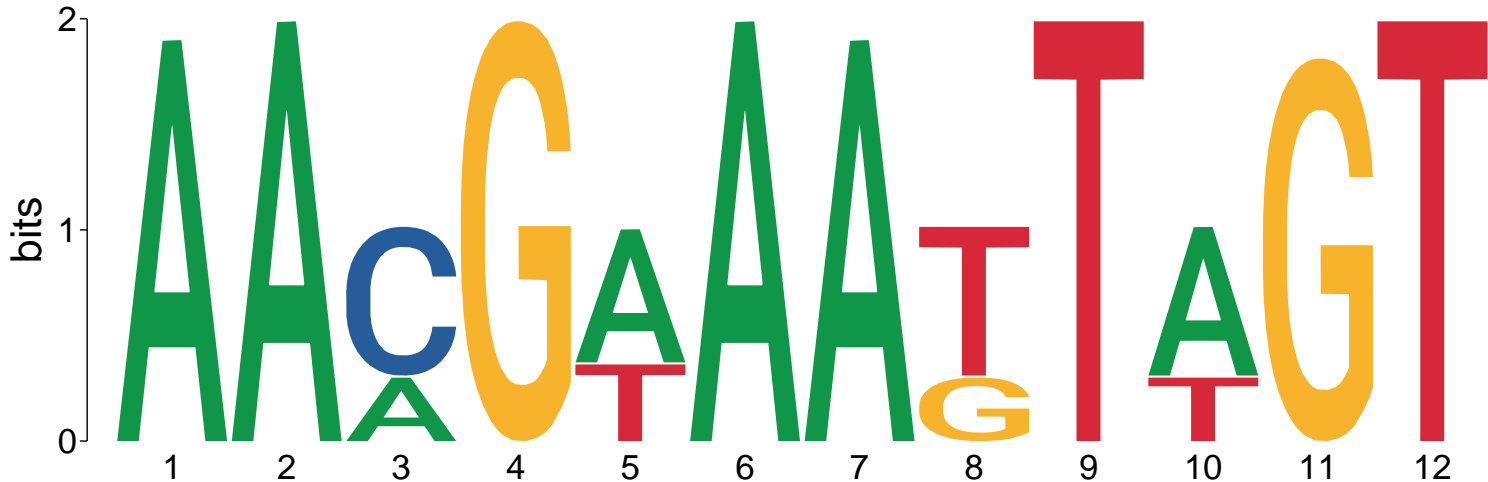
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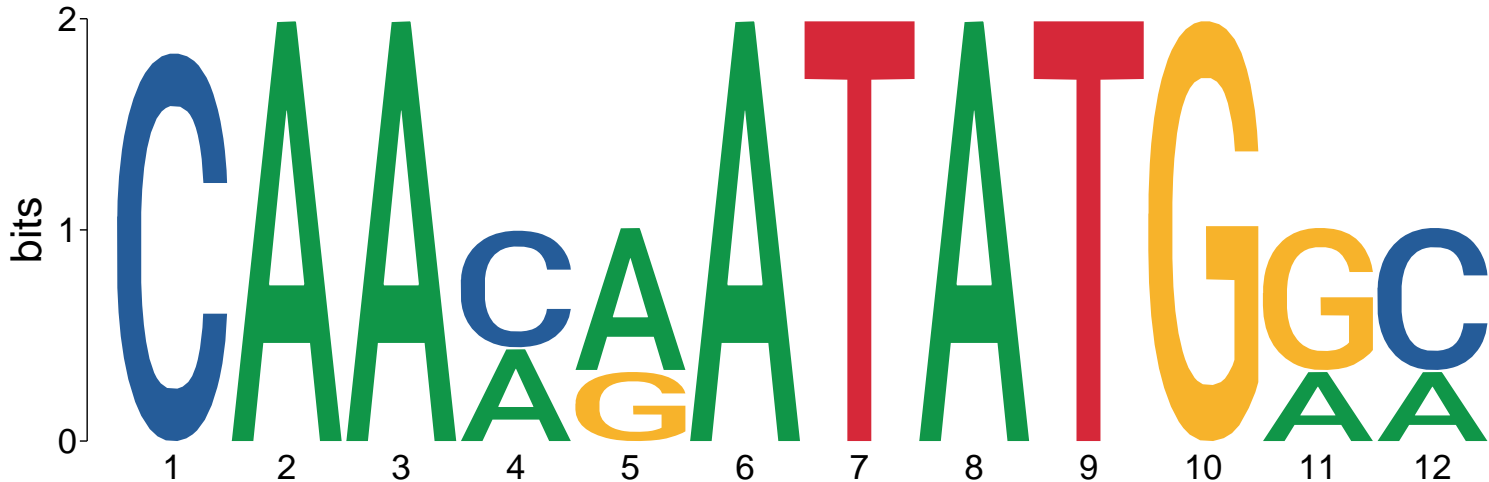
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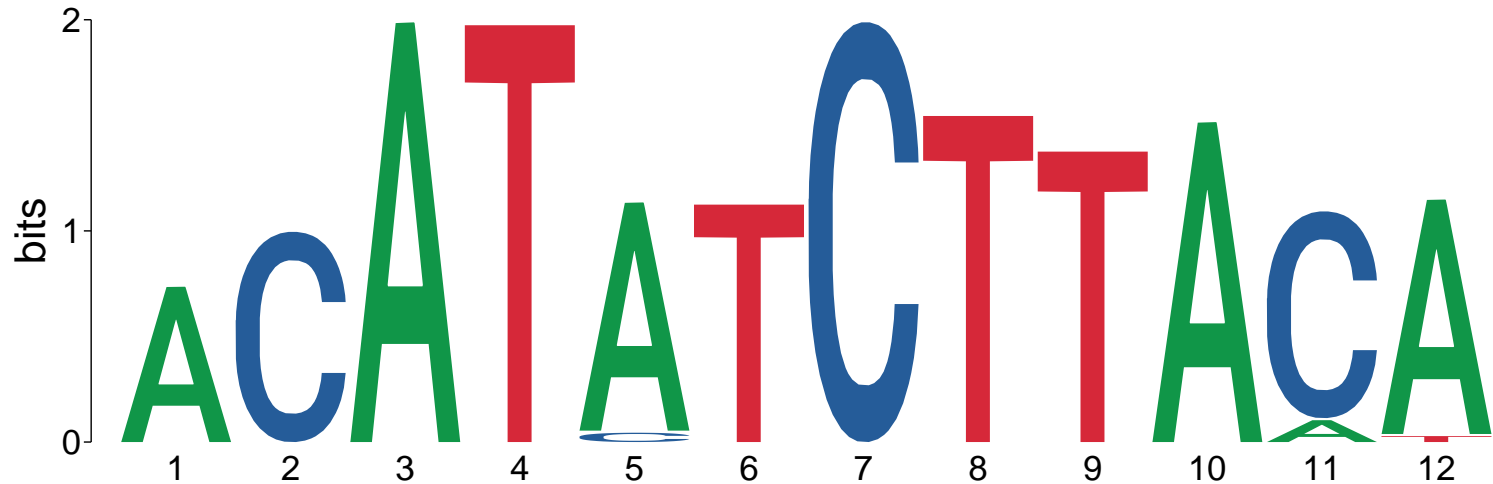
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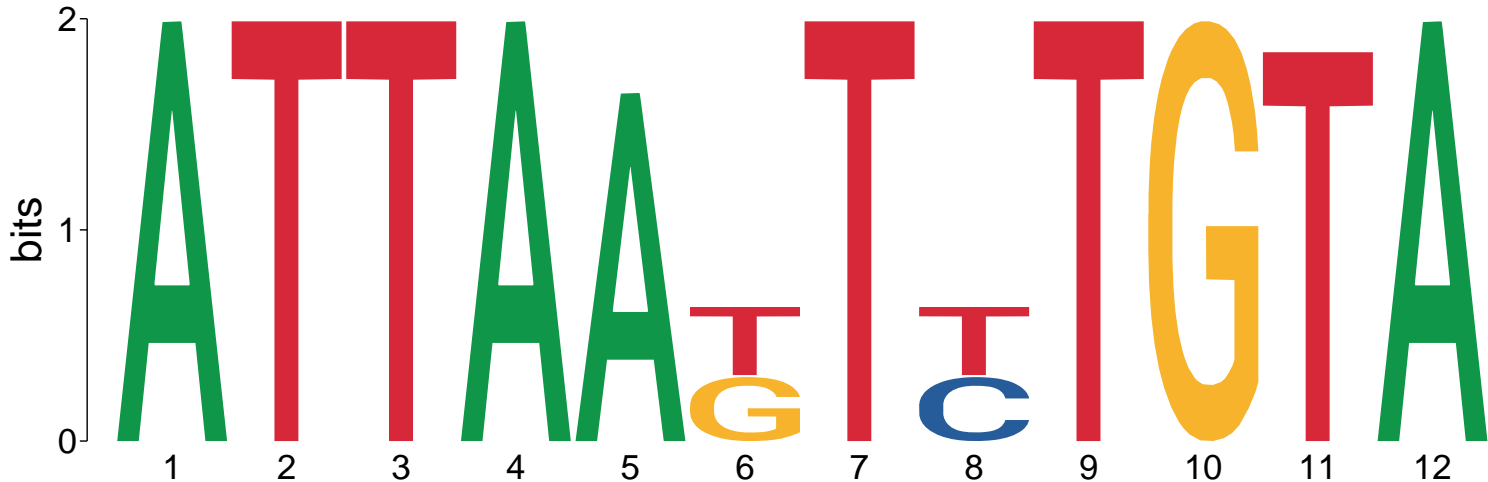
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2

3

4

5

6

7

8



294

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

T

A

A

T

C

G

A

T

T

A



297

bits

2

1

0



298

2

1

0

bits

1

2

3

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5

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7

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9

10

C T G G T C G A G T

299

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

TGGGGTGAAGTC



302

2

1

0

bits

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6

7

8

9

10



303

2

bits

1

0

1

2

3

4

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6

7

8

9

10

A C G G A A G T T T



308

2

1

0

bits

1

2

3

4

5

6

7

8

9

10



309

bits

2

1

0

1

2

3

4

5

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7

8

9

10

A A G C T T A G A C C

310

2

1

0

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C

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C

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A

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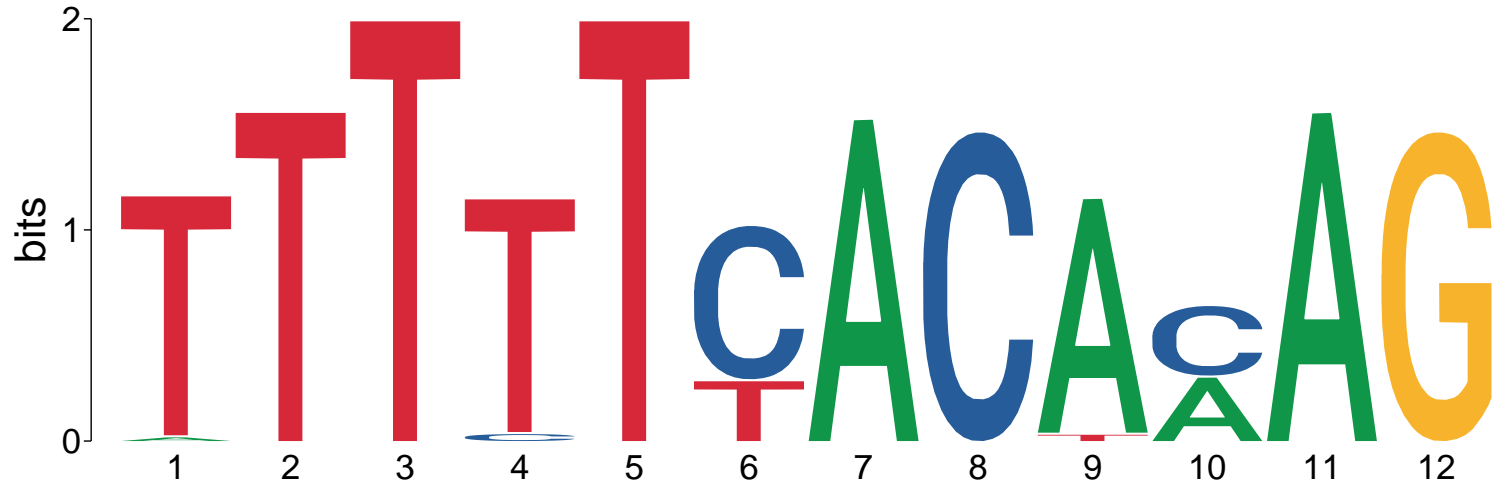
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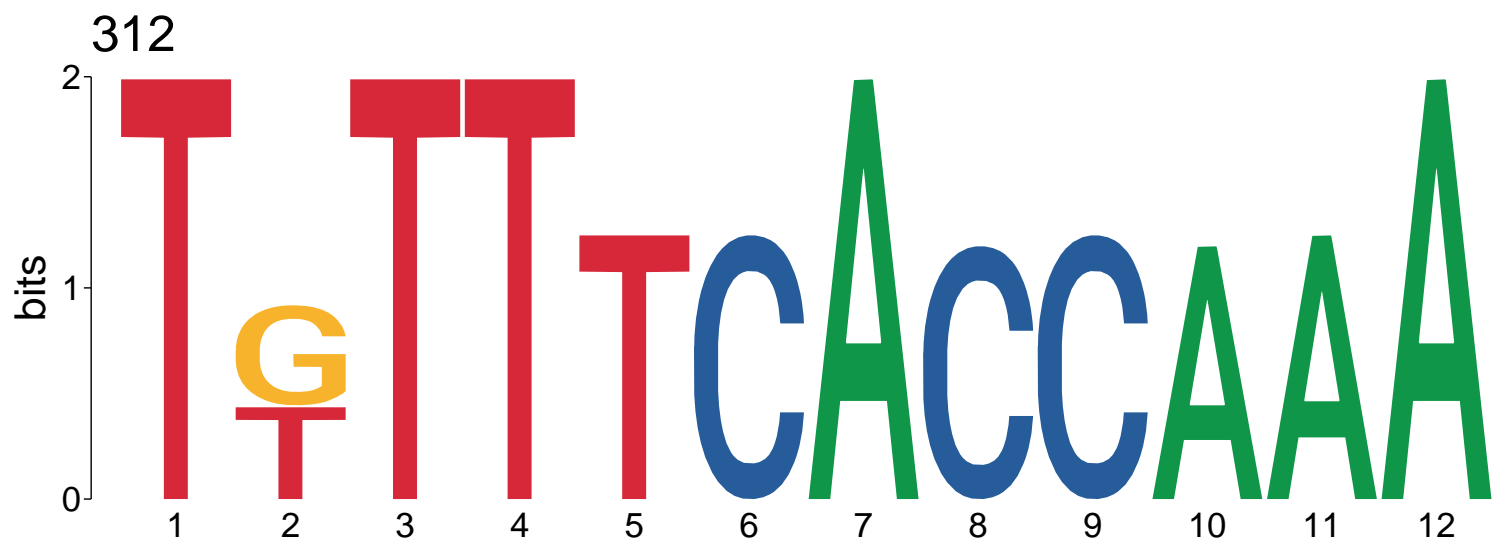
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311





313

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T

A

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T

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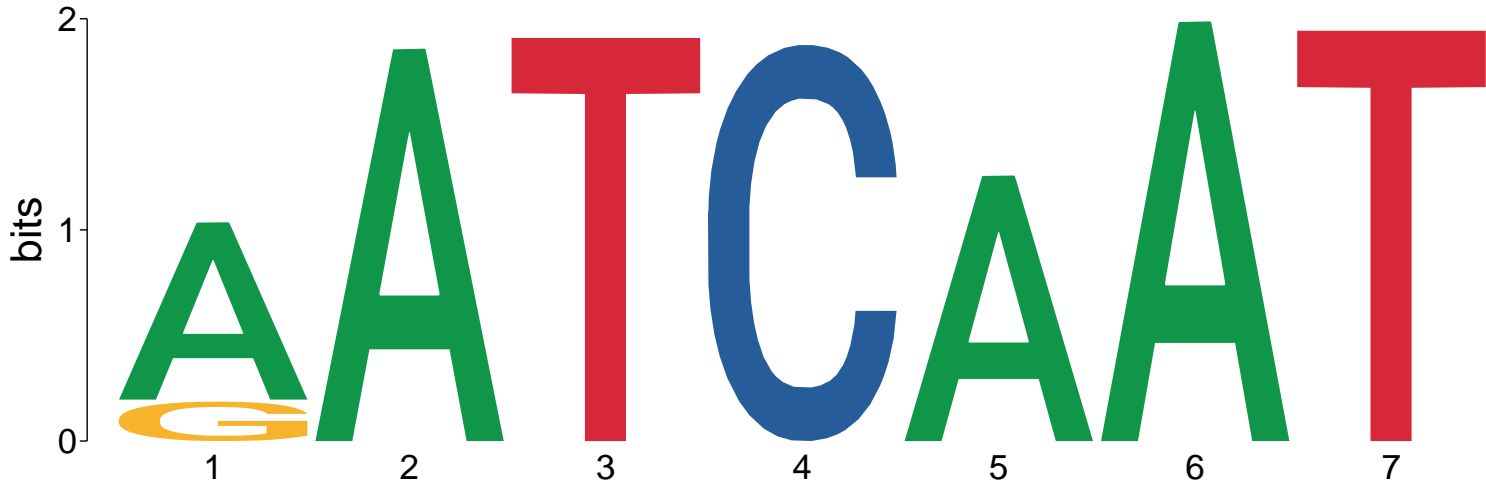
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315



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317

2

1

0

bits

1

2

3

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6

7

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9

10

G

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G

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A

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G

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A

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318

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7

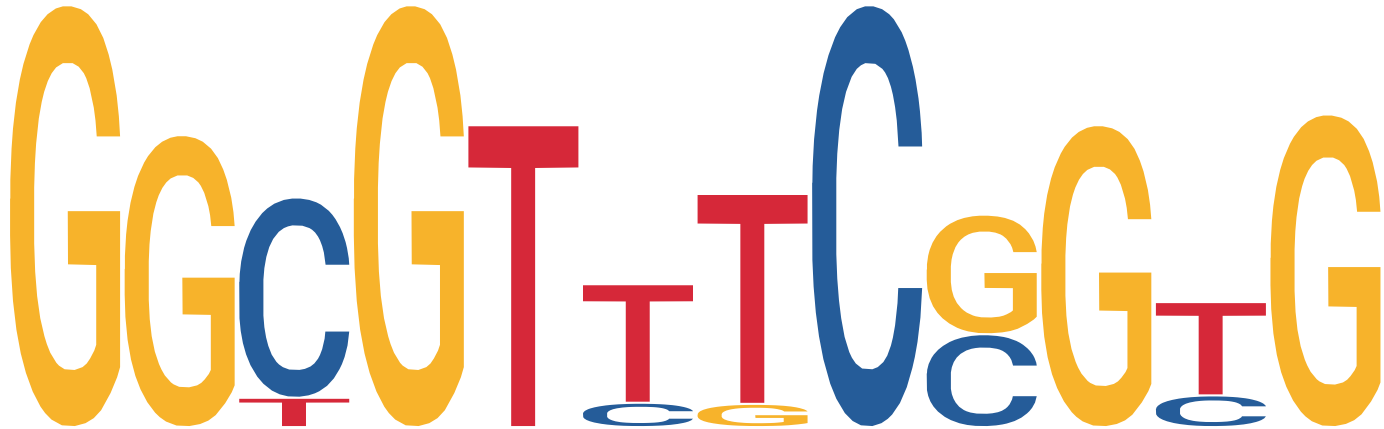
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9

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11

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319

2

1

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bits

1

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10

A T G G G A A G G C

324

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12





326

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

C A A G A T G G C G G C



329

2

bits

0

1

2

3

4

5

6

7

8

9

10



331

2

1

0

bits

1

2

3

4

5

6

7

8

9

T

G

A

T

T

G

A

C

G

332

2

bits

1

0

1

2

3

4

5

6

7

8

9

T

A
G

ACC

T

AA

C

T

333

2

bits

1

0

1

2

3

4

5

6

7



334

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

13

14



335

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



336

2

bits

1

0

1

2

3

4

5

6

7

TGTCAAG A

337

2

1

0

bits

1

2

3

4

5

6

7



338

bits

2

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14



339

2

bits

1

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10

11

12

13

14

A

T

T

T

T

G

C

T

G

A

G

T

C

A

T

340

2

bits

1

0

1

2

3

4

5

6

TGCGATG

Position	Nucleotide	Color
1	T	Red
2	G	Yellow
3	C	Blue
4	A	Green
5	T	Red
6	G	Yellow

341

2

bits

1

0

1

2

3

4

5

6

7

8

9

10



343

2

bits

1

0

1

2

3

4

5

6

7

8

9

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A

G

T

C

A

G

T

T

T

T

345

2

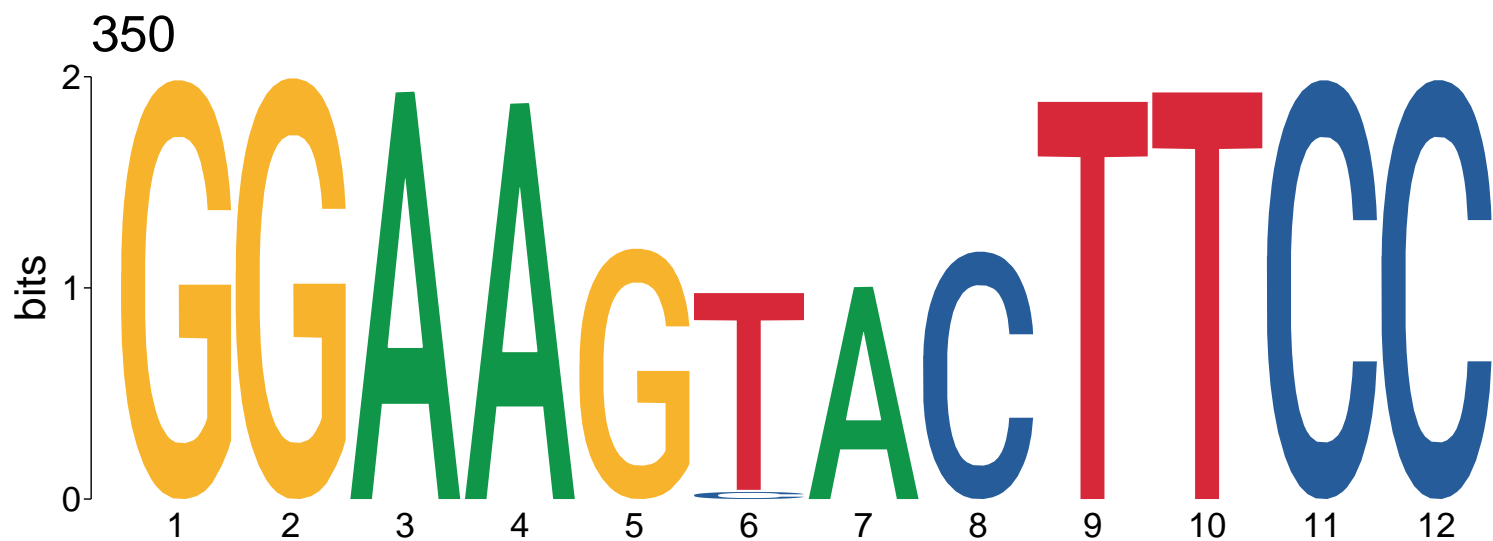
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1

0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18





351

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

A

T

T

T

C

C

G

G

G

A

A

G

T

353

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

A

A

C

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G

C

A

A

A

C

C

G

C

A

355

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

c C A T G G c A A C

356

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

G T C T A G C A A C

357

2

bits

1

0

1

2

3

4

5

6

7

8

9

C

c

T

G

G

C

A

A

C

358

2

1

0

bits

T

G

T

T

G

C

C

T

A

G

C

A

A

C

C
A

1

2

3

4

5

6

7

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13

14

15

359

2

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1

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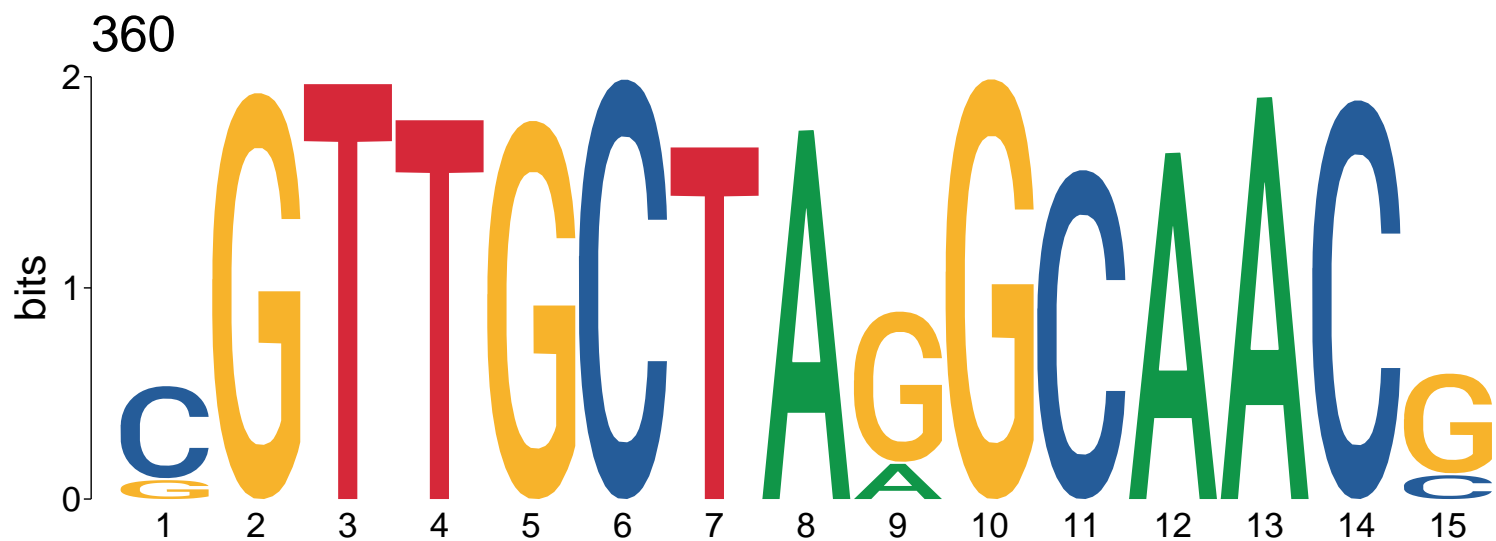
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10

11

12





362

2

bits

1

0

1

2

3

4

5

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7

8

9

10

A C C A T C A C C C

363

2

bits

1

0

1

2

3

4

5

6

7

8

9

10





365

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12



366

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

c A A A G C C c G C

367

2

bits

1

0

1

2

3

4

A

C

G

C

369

2

bits

1

0

1

2

3

4

5

6

7

8

9

10



370

2

bits

1

0

1

2

3

4

5

6

7

8

9

10



371

2

bits

1

0

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4

5

6

7

8

9

10



372

2

1

0

bits

1

2

3

4

5

6

7

8

9

10



373

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

CACCGTCCCA

375

2

1

0

bits

1

2

3

4

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6

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9

10



376

2

1

0

bits

1

2

3

4

5

6

7

8

9

10



377



378

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

CGC TTT AAG TTT

379

2

bits

1

0

1

2

3

4

5

6

7

8

9

10



380

2

bits

0

1

2

3

4

5

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7

8

9

10

A

T

T

G

A

T

G

T

G

T

381

2

bits

1

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2

3

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5

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9

10

GAGAGC AATC

382

2

bits

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2

3

4

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6

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8

9

10

11

12



383

2

1

0

bits

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2

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4

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7

8

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10

11

12

G

T

T

A

T

C

A

A

T

A

A

T

384

2

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10

11

12

G

T

T

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A

T

C

A

T

T

A

A

385

2

1

0

bits

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2

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8

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10

11

12

T A G T C A T T T T T T T T

386

2

bits

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0

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2

3

4

5

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7

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9

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11

12



388

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1

0

bits

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4

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7

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A

T

G

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G

C

G

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G

C

389

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bits

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0

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9

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11



390

2

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0

bits

1

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3

4



391

2

1

0

bits

1

2

3

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10

11

CGGCGACATTC

392

2

bits

1

0

1

2

3

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393

2

bits

1

0

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7

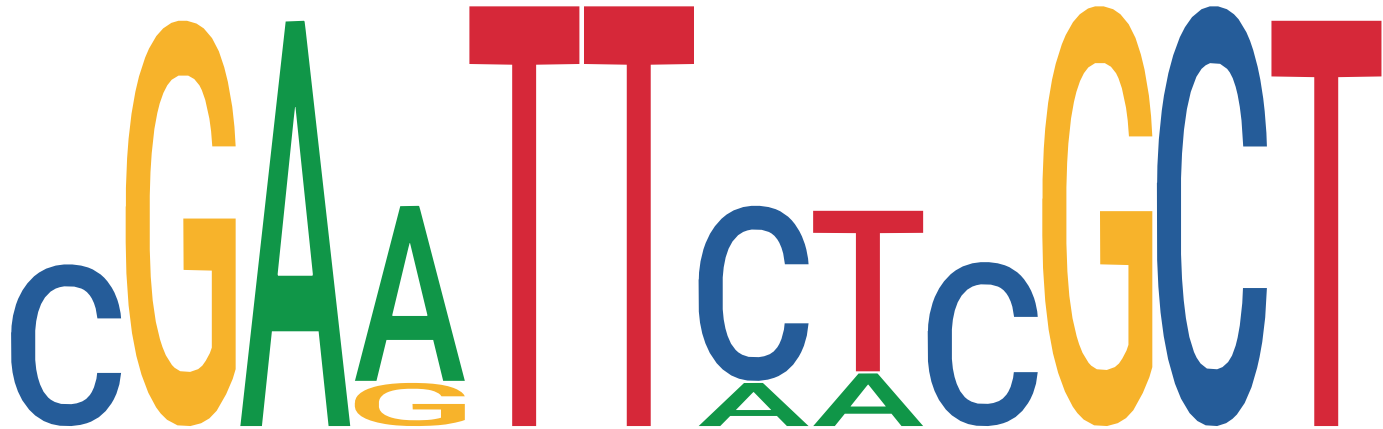
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9

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11

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394

2

1

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bits

1

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11

12

A G G C A T T A G C C C T

395



396

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

G A A C T A T C C C

397

2

1

0

bits

1

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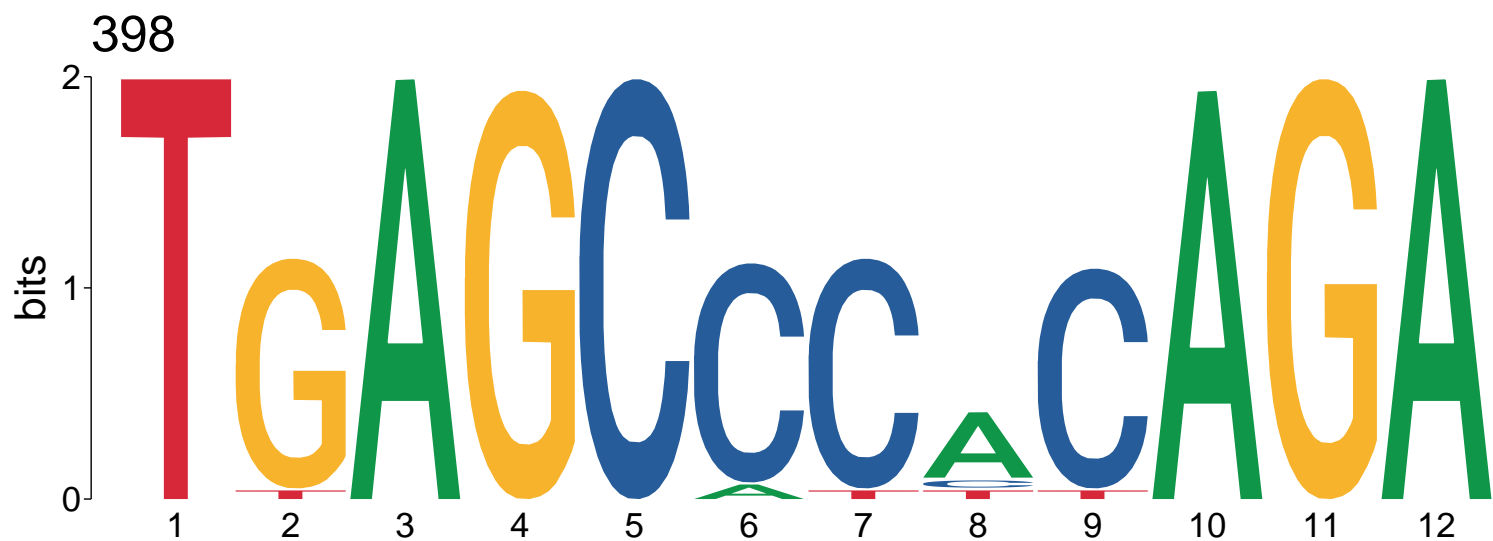
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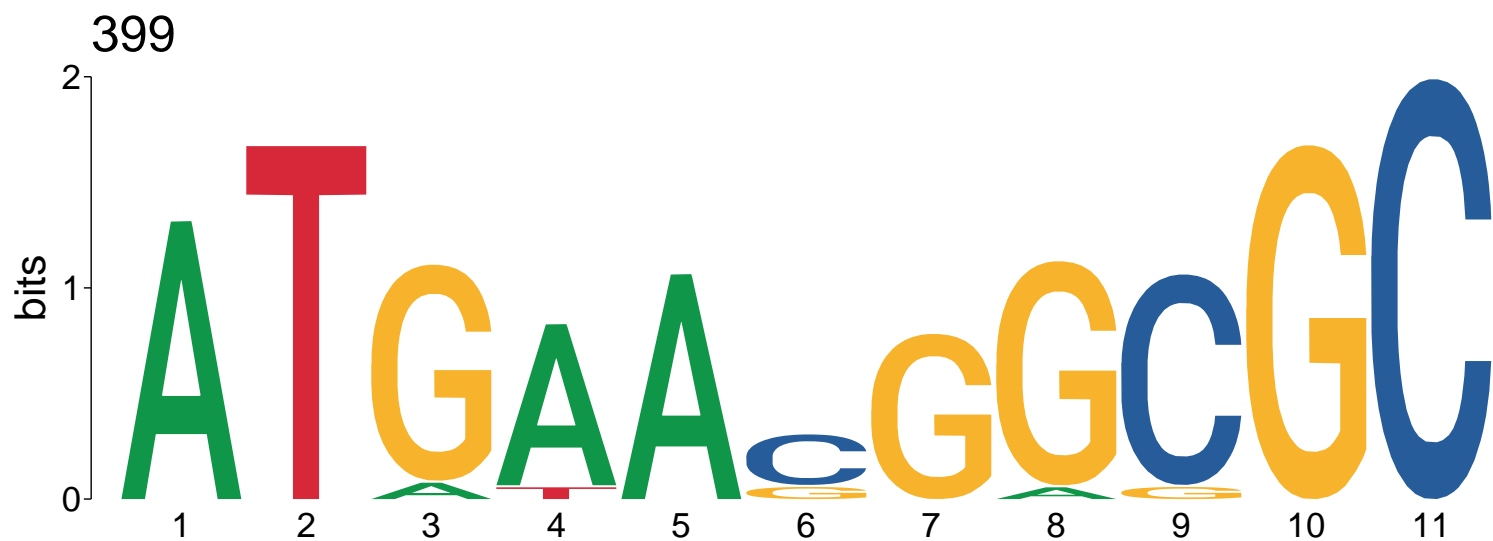
8

9

10

A A T C T C G G C T G







401

bits
2
1
0

1

2

3

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8

9

10

11

12





403

bits

2

1

0

1

2

3

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5

6

7

8

9

10

G

T

G

G

C

T

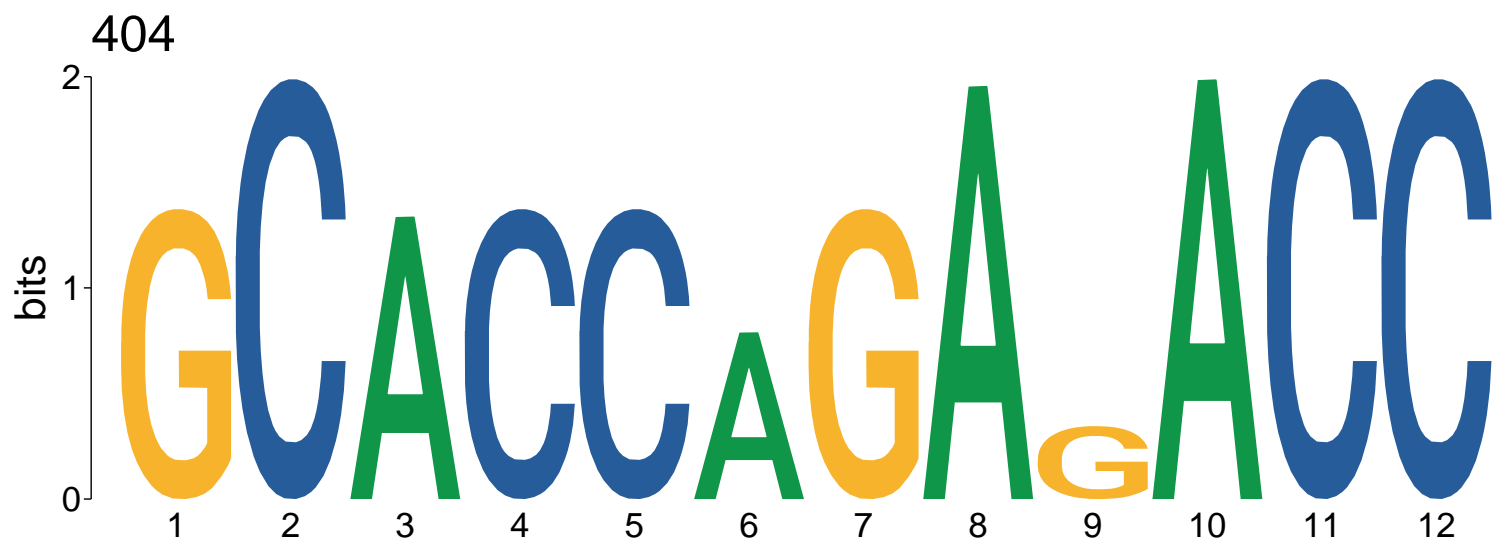
T

G

T

G

A



405

2

bits

1

0

1

2

3

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6

7

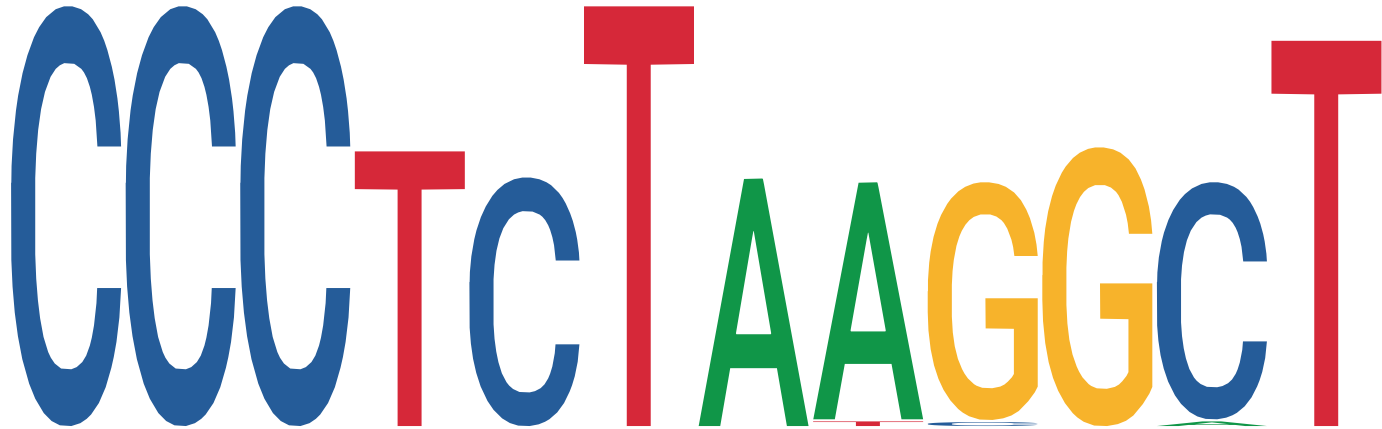
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9

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11

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406

2

bits

1

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1

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407

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G

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C

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A

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411

2

bits

1

0

1

2

3

4

5

6

7

T

G

A

C

C

T

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413

2

bits

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0

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2

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10

11

T

T

C

A

A

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G

T

C

A

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414

2

bits

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2

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10

11

12

C A T T C G T A C G A A

415

2

bits

1

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1

2

3

4

5

6

7

8

9

10

C A A A C T G T G T

416

2

1

0

bits

1

2

3

4

5

6

7

8

TGTACGGGA

417

bits

2

1

0

1

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12

CC

A

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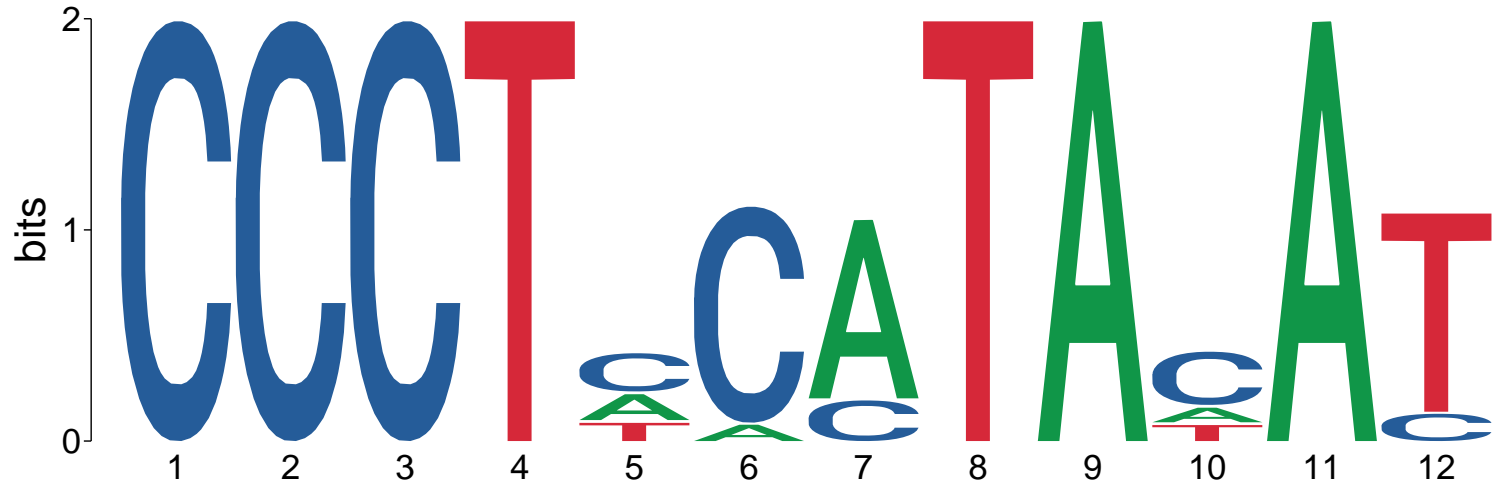
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A

418



419



420

2

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bits

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C T C C G T T A C C

421

2

bits

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14



422

2

bits

1

0

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3

4

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A

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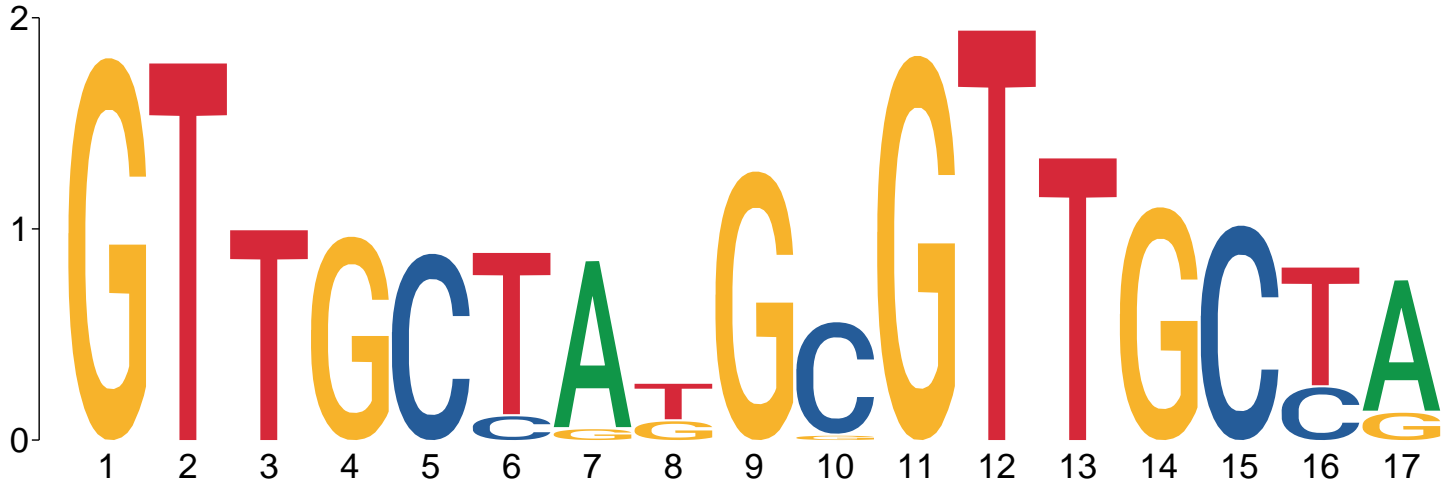
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423

2

bits

0



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12

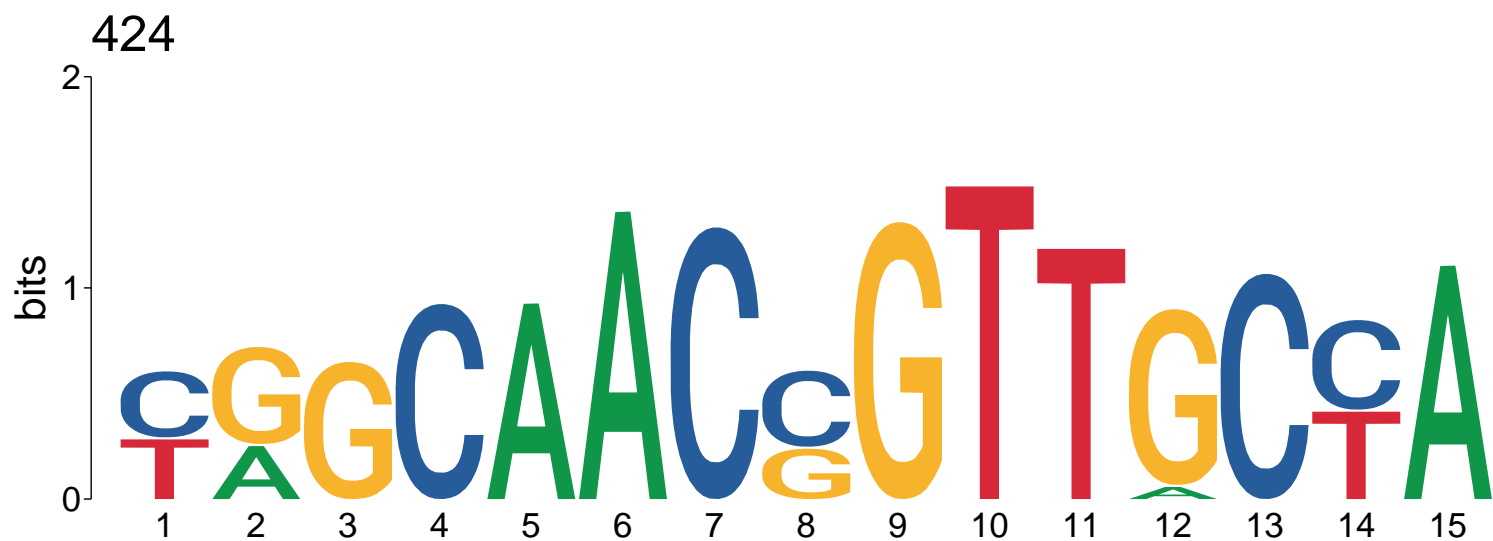
13

14

15

16

17



425

2

bits

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0

G

C

C

A

T

A

A

A

T

C

A

1

2

3

4

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6

7

8

9

10

11

426

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

T

G

A

T

T

G

A

C

G

G

427

2

1

0

bits

1

2

3

4

5

6

7

8

9



429

2

bits

1

0

G

1

T

2

G

3

C

4

T

5

G

6

A

7

C

8

A

9

G

10

G

11

430

2

bits

1

0

1

2

3

4

5

6



431

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8

9

GGCCATACTAA

432

2

1

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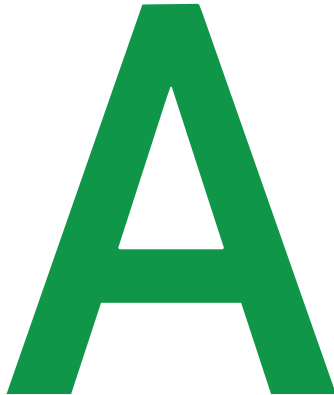
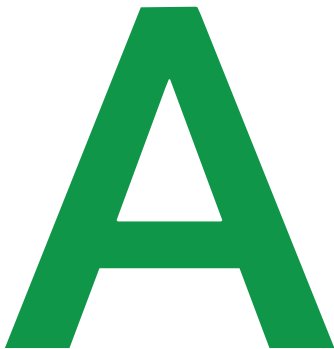
bits

1

2

3

4



433

2

bits

1

0

1

2

3

4

5

6

7

8

9



434

2

bits

1

0

1

2

3

4

5

6

7

8



435

2

1

0

bits

1

2

3

4

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6

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8

G

T

G

A

T

T

A

G

436

2

1

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bits

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2

3

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A

T

T

A

A

T

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A

A

T

T

A

442

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1 2 3 4 5 6 7 8 9 10 11 12 13 14



444

2

bits

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14



445

2

bits

1

0

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12

13

Sequence logo showing the conservation of nucleotides across 13 positions. The y-axis represents information content in bits (0 to 2). The sequence is GGGTCAAGGTCA. The G's at positions 2, 3, 9, and 10 are highly conserved, while the T's at positions 4 and 11 are also conserved. The C's at positions 5 and 12 are conserved. The A's at positions 6, 7, 8, and 13 are conserved. The G at position 1 is conserved. The G at position 13 is also conserved.

Position	Nucleotide	Information Content (bits)
1	G	~0.8
2	G	~1.6
3	G	~1.5
4	T	~1.3
5	C	~1.1
6	A	~1.4
7	A	~0.8
8	A	~1.2
9	G	~1.9
10	G	~1.5
11	T	~1.2
12	C	~0.9
13	A	~0.9

446

2

bits

1

0

A

1

T

2

G

3

G

4

C

5

G

6

G

7

C

8

G

9

447

2

1

0

bits

1

2

3

4

5

6

7

8

9



448

2

1

0

bits

1

2

3

4

5

6

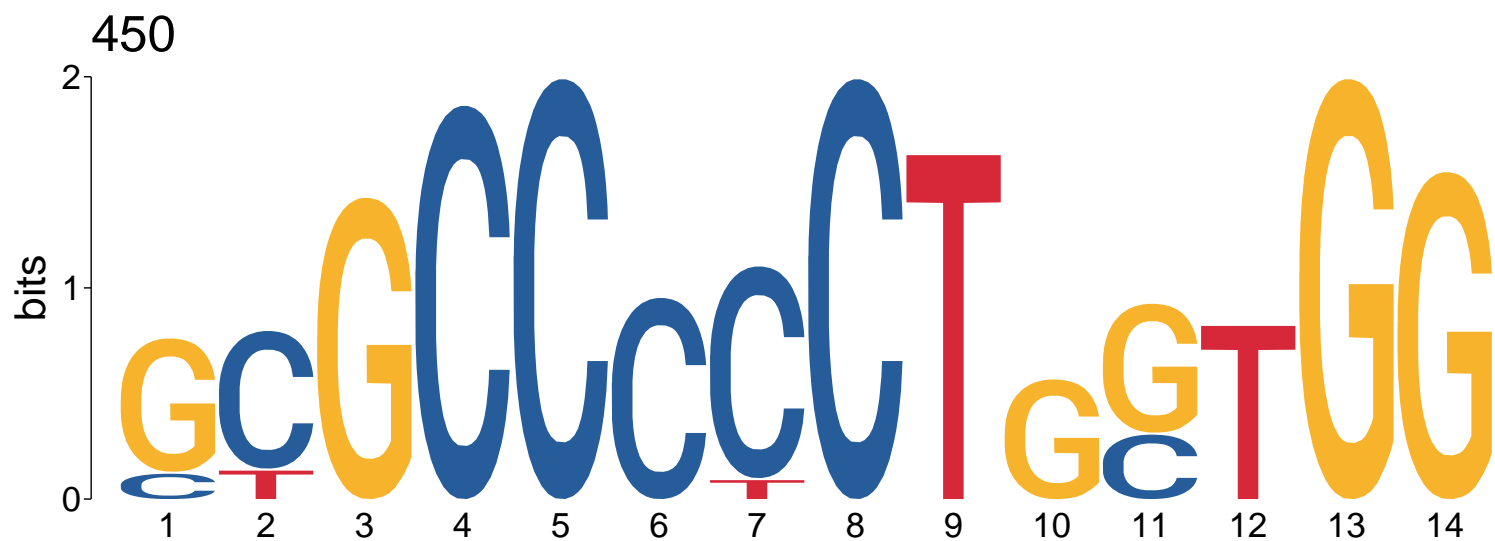
7

8

9

10





453

2

bits

1

0

1

2

3

4

5

6

7

8

9

10



454

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

CT

T

T

CC

TG

GG

AA

AG

455

2

1

0

bits

1

2

3

4

5

6

7

8

9

G

C

C

A

T

A

A

A

A

458

2

bits

1

0

1

2

3

4

5

6



459

2

bits

1

0

1

2

3

4

5

6

7



460

2

1

0

bits

1

2

3

4

5

6



461

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

T

T

T

T

A

T

TG

GA

GG

G

462

2

1

0

bits

1

2

3

4

5

6

7

8

T

T

AA

T

T

GG

463

2

1

0

bits

C

1

T

2

T

3

A

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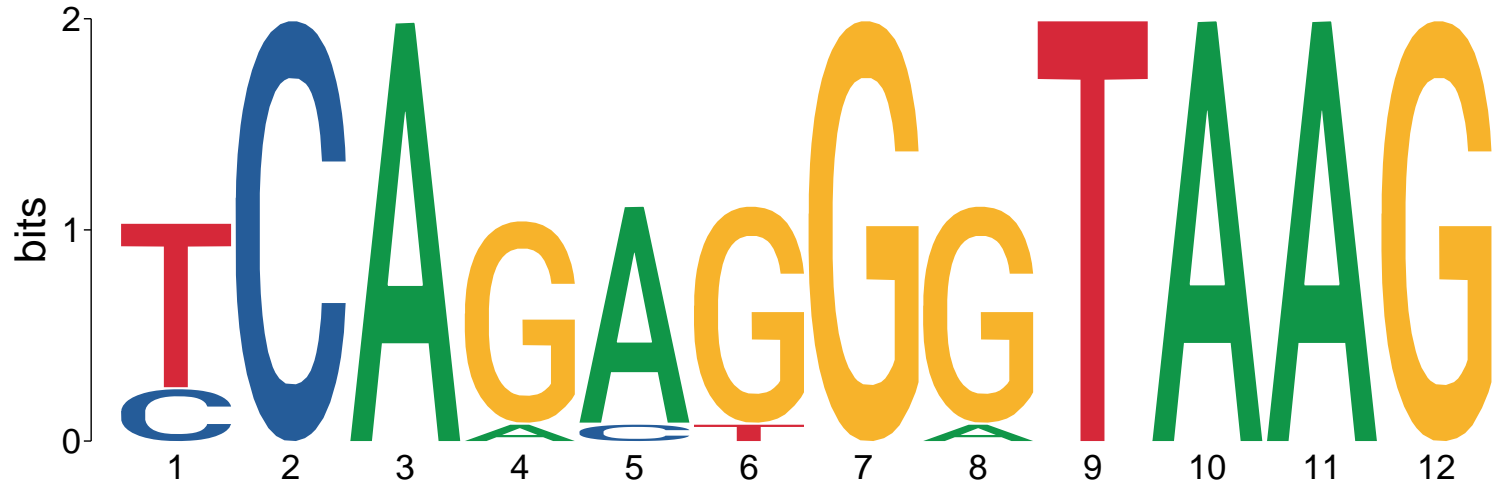
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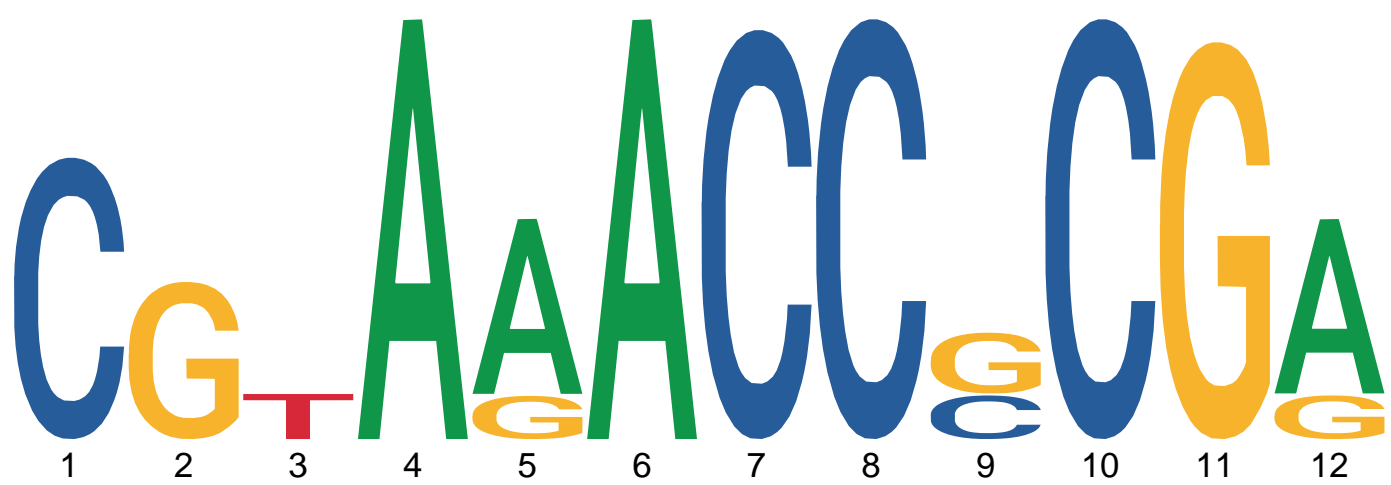
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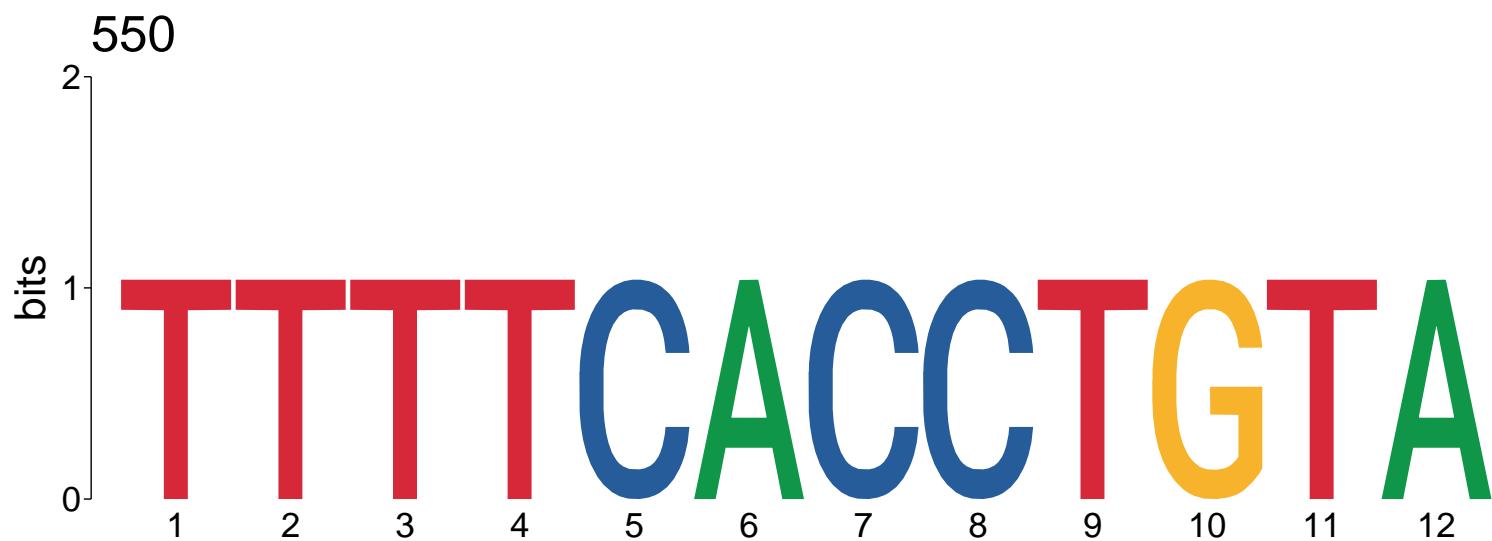
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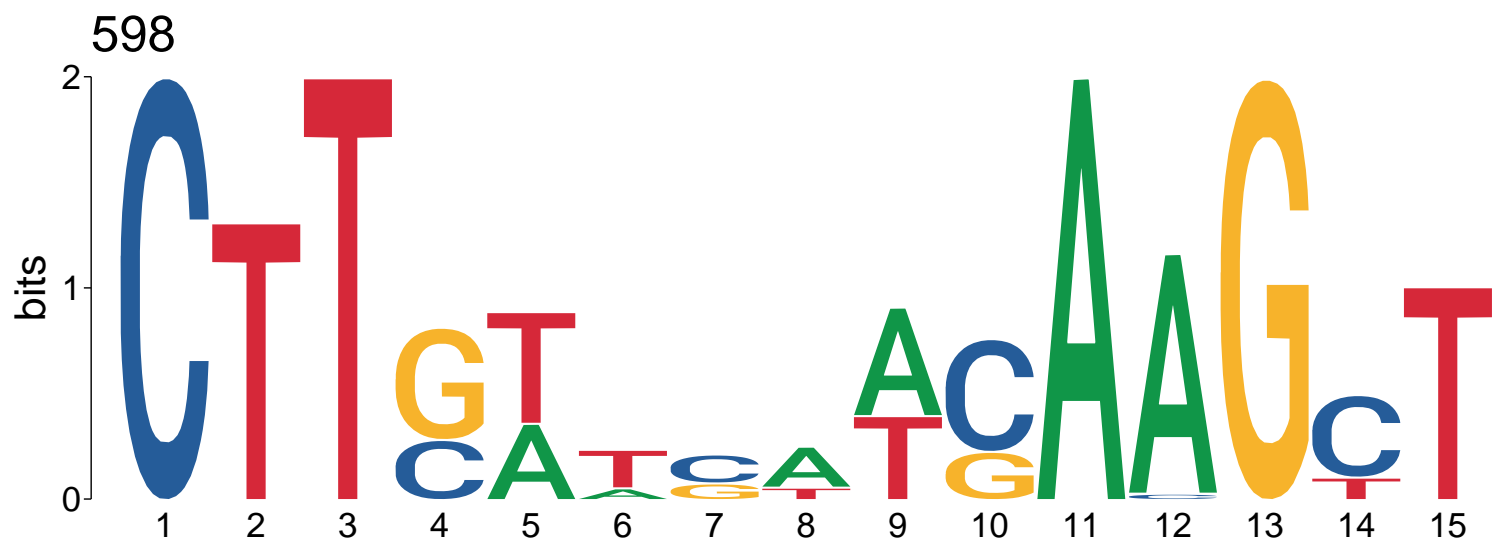
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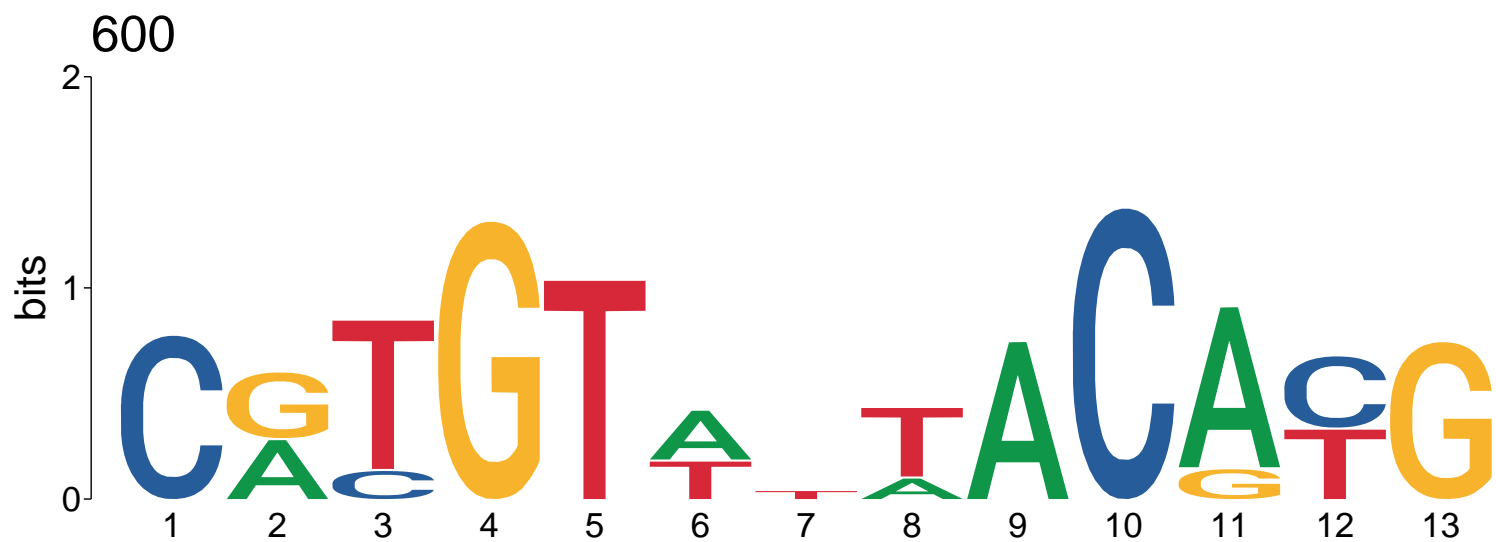
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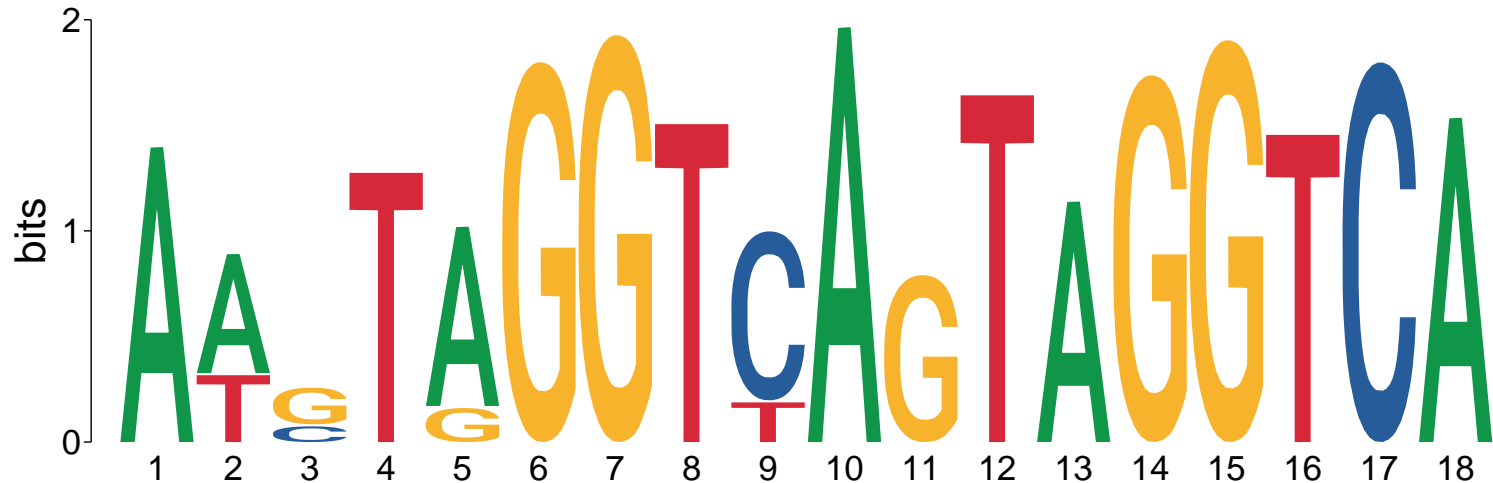
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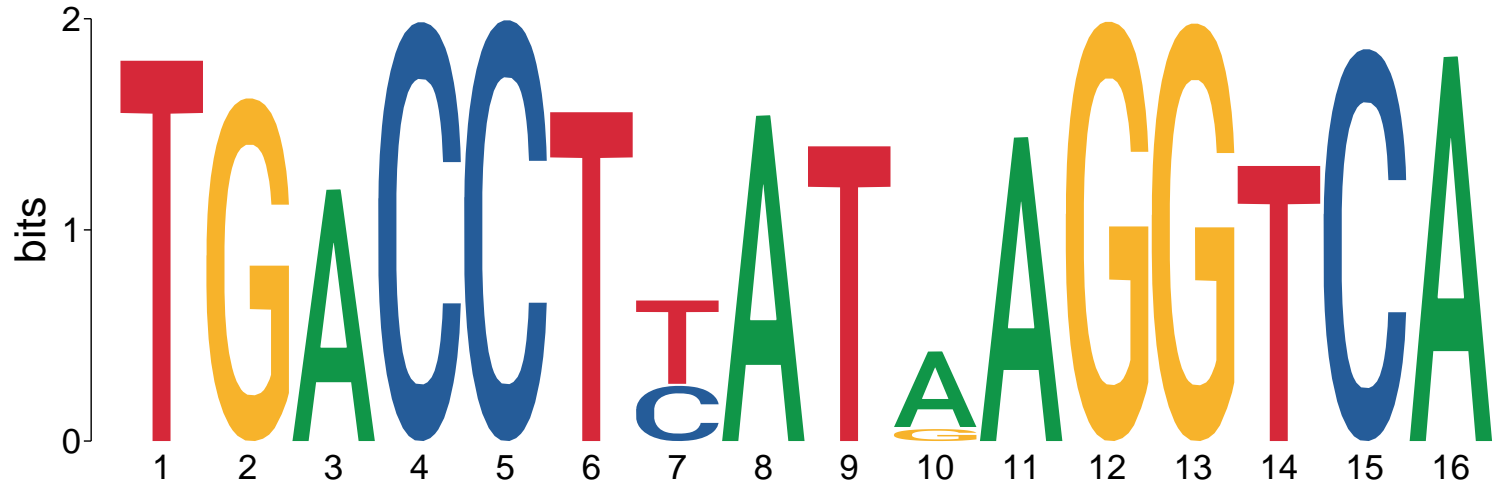
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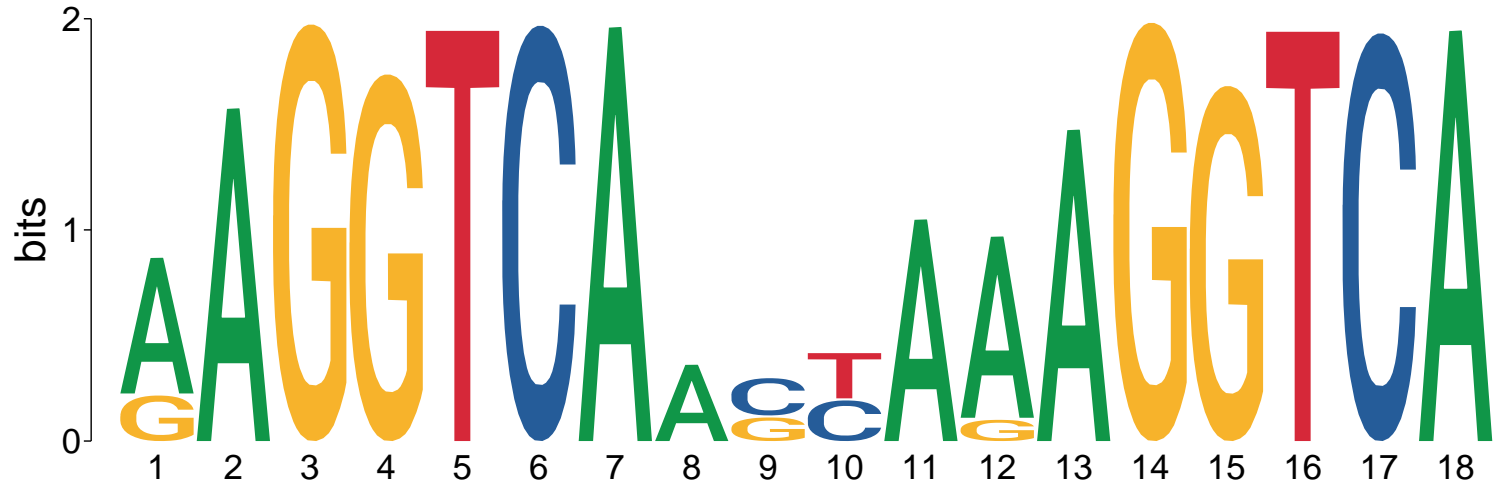
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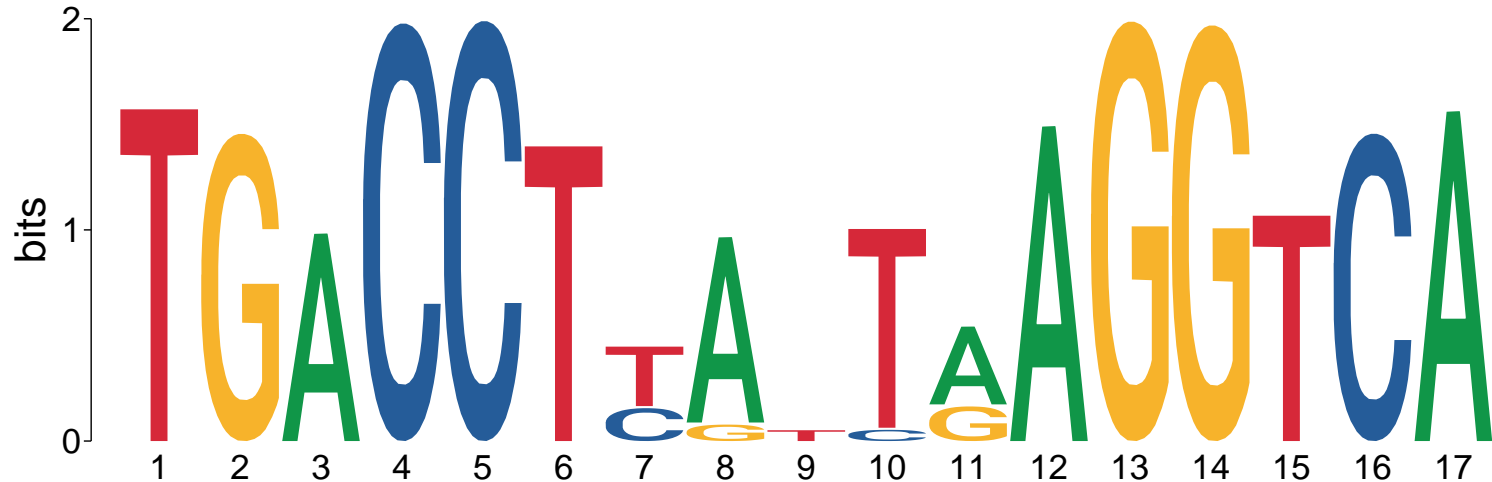
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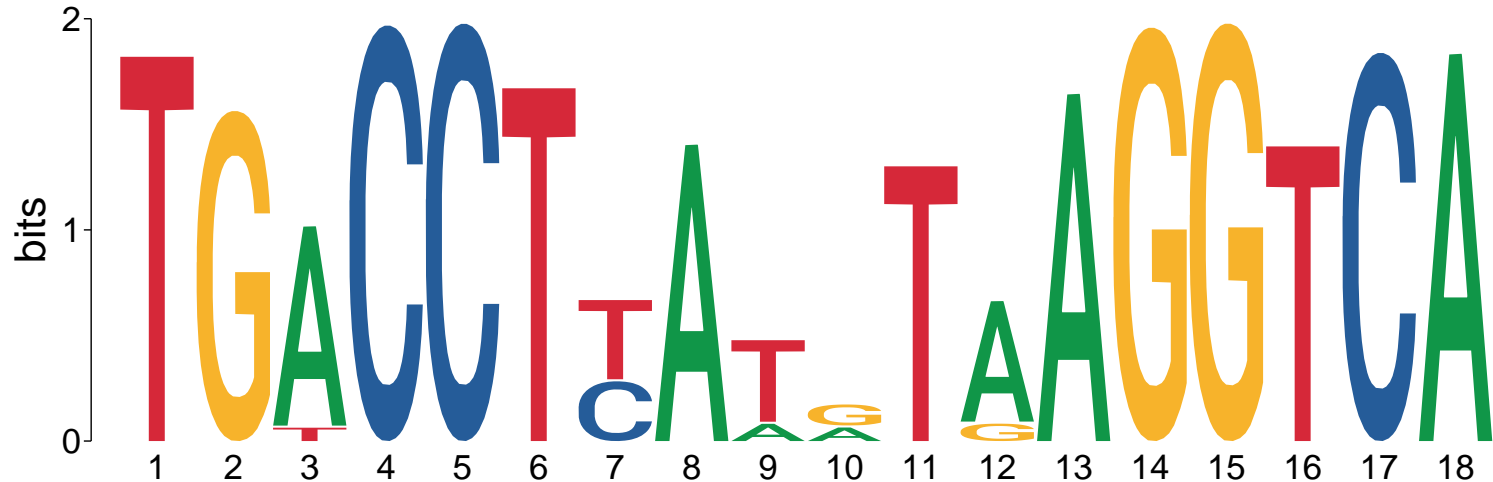
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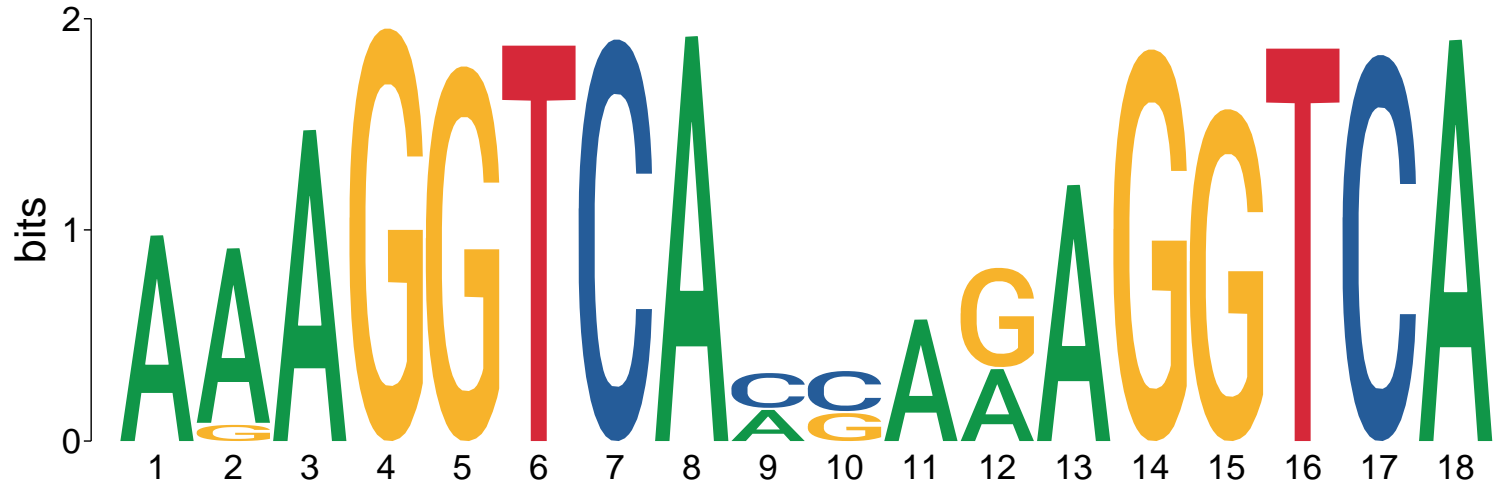
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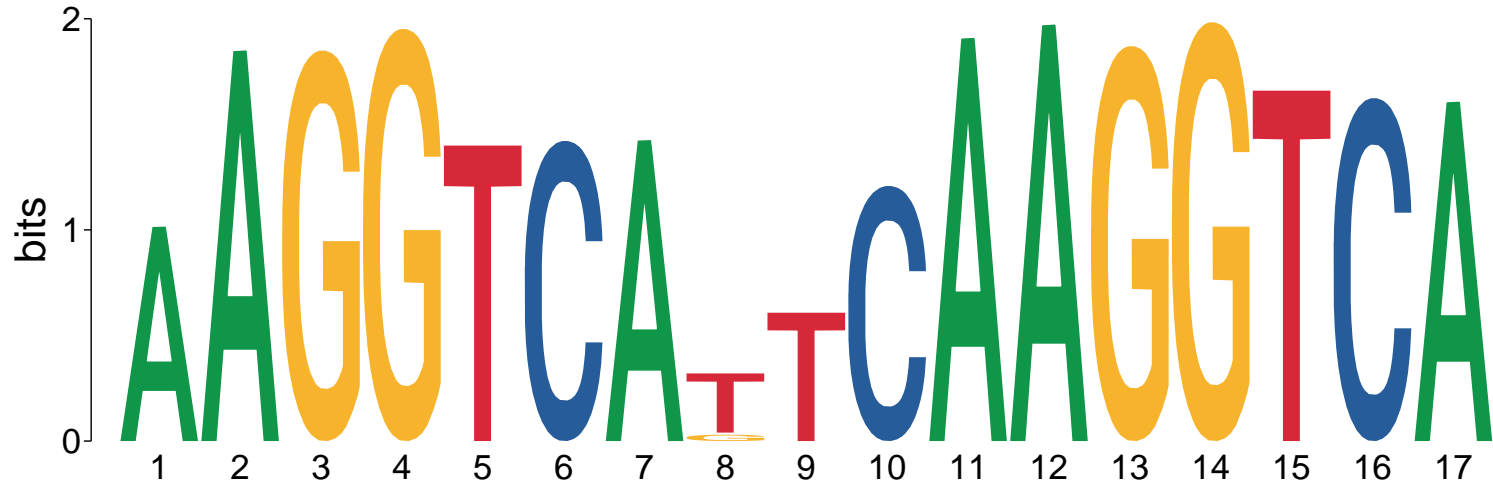
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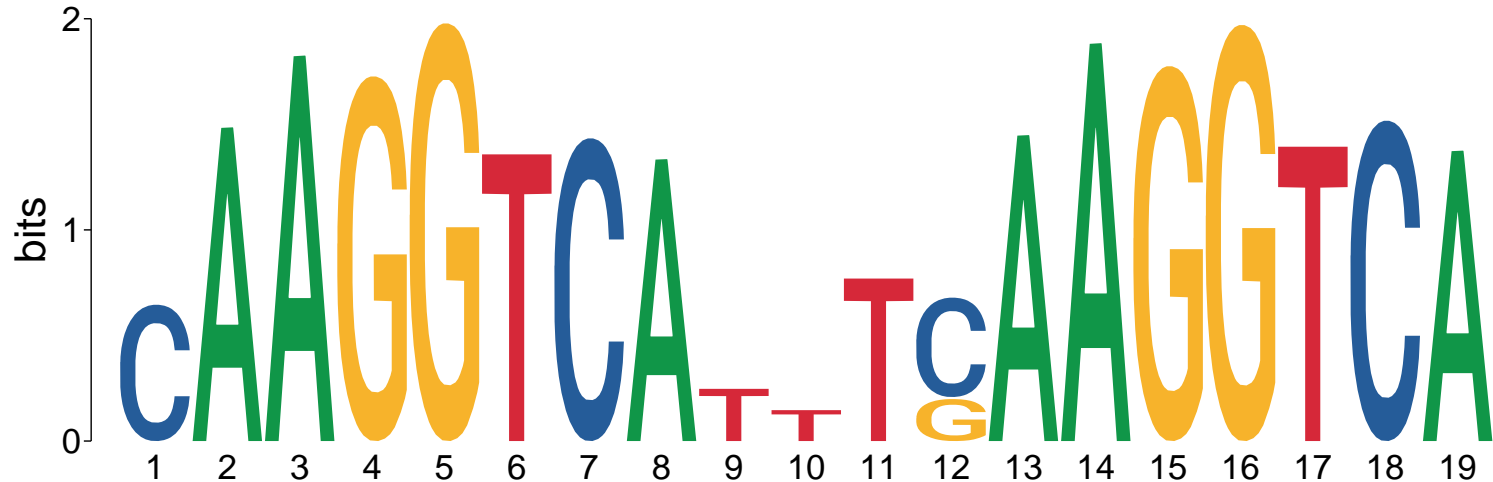
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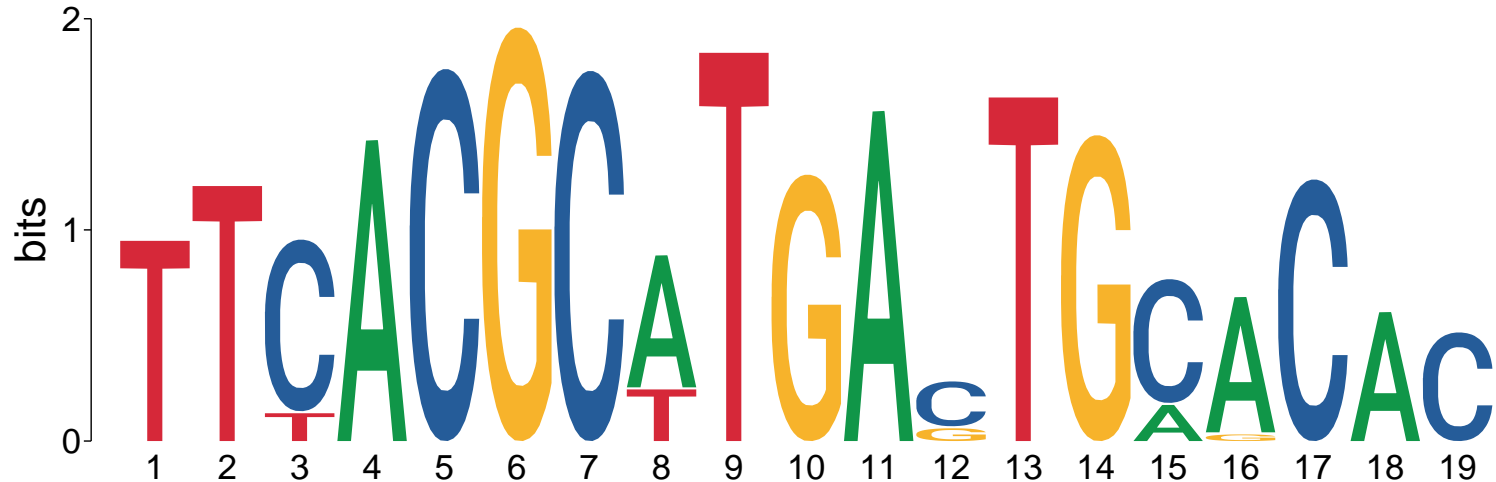
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A

9

G

10

C

11

G

12

T

13

G

14

A

15

C

16

G



672

2

bits

1

0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



673

2

1

0

bits

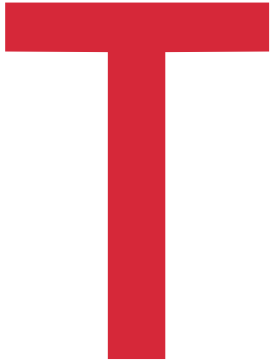
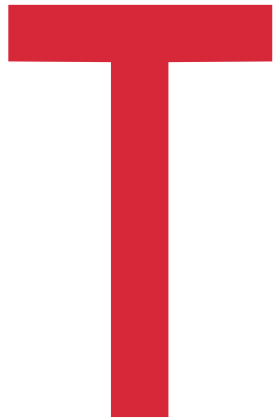
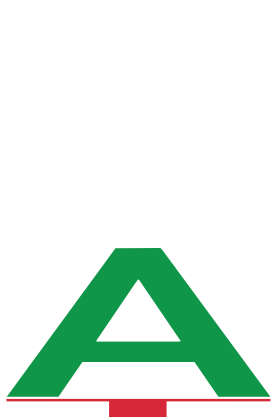
1

2

3

4

5



674

2

1

0

bits

1

2

3

4

5

6

7

8

9

10



675

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

AG

T

T

AG

C

G

C

A

A

TC

676

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

T T G T C T G C G T

677



679

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

A T T A G A A C C A

680

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

TTTTTGATAAAA

681

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12



682

2

bits

1

0

G

T

1

A

C

2

T

3

T

G

4

T

5

T

6

G

T

7

T

8

T

9

T

G

10

A

11

A

12

685

2

1

0

bits

C C C

G

T

T

A

A

G

T

A

A

A

C

A

A

A

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

686

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

CCATATAATGGAC

687

2

1

0

bits

1

2

3

4

5

6

7

8

9

10



689

2

1

0

bits

1

2

3

4

5

6

7



690

2

bits

1

0

1

2

3

4

5

6

7

8



691

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11



T

A

A

T

T

A

A

A

T

T

A

692

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11



693

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11



694

2

bits

1

0

1

2

3

4

5

6

7

TGCGTGAAC

695

2

1

0

bits

1

2

3

4

5

6

7

G T C A G C A

696

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11



697



698

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

13

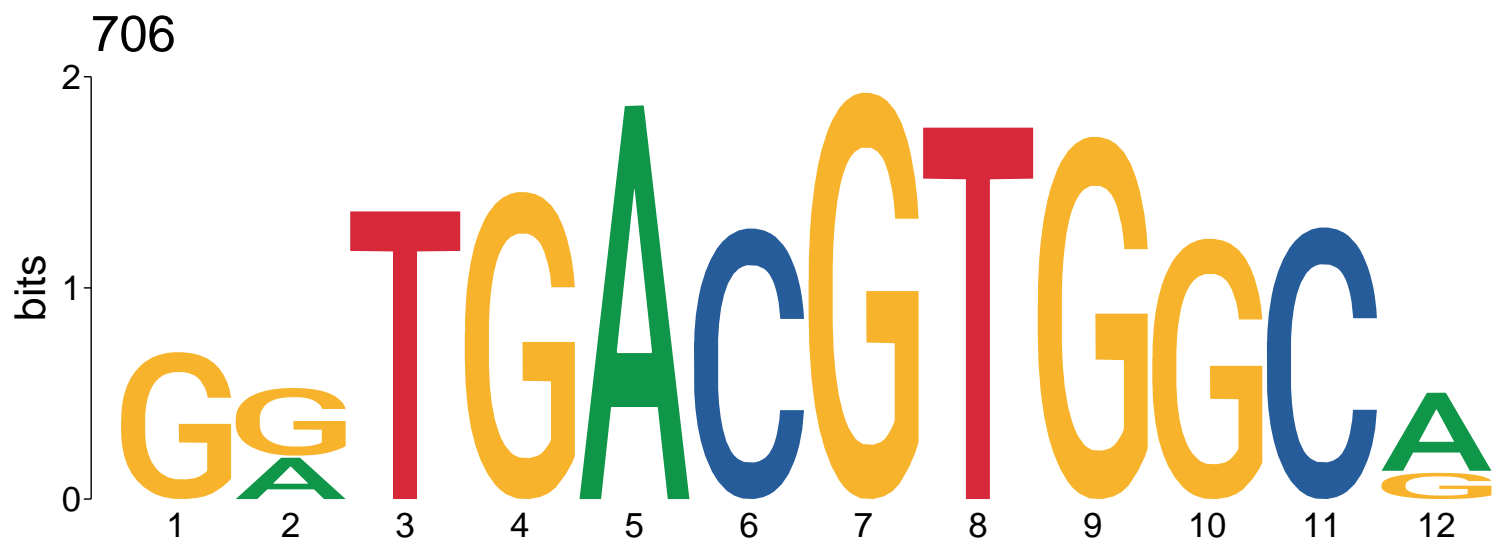


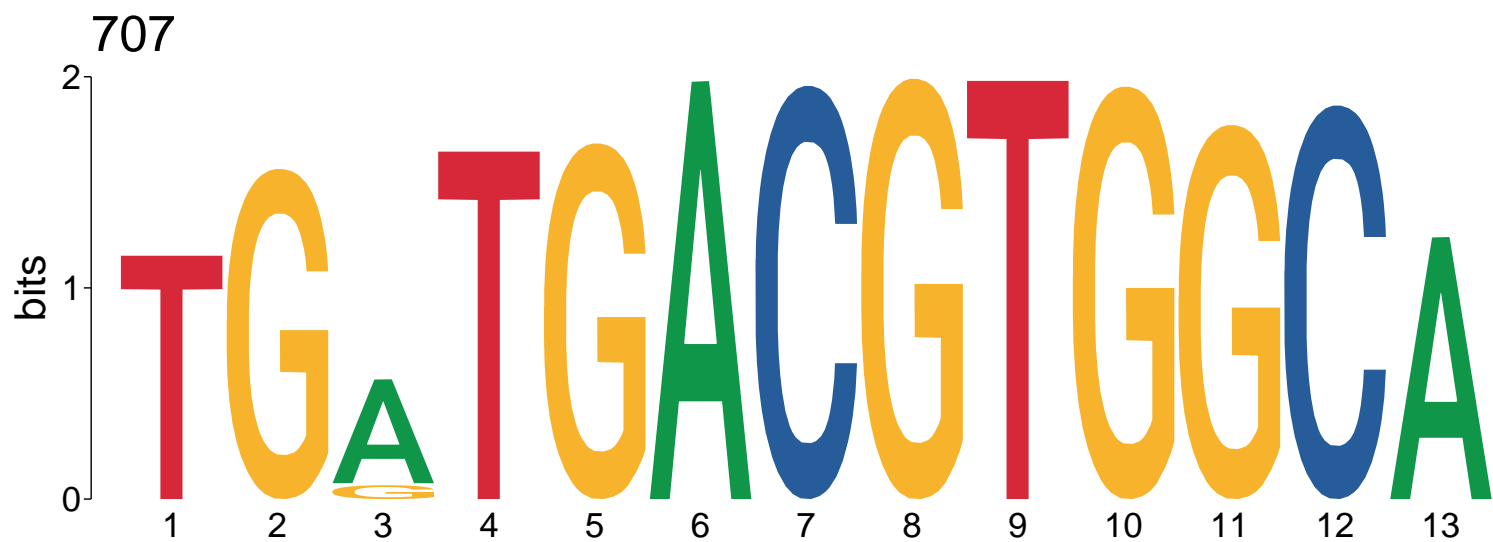


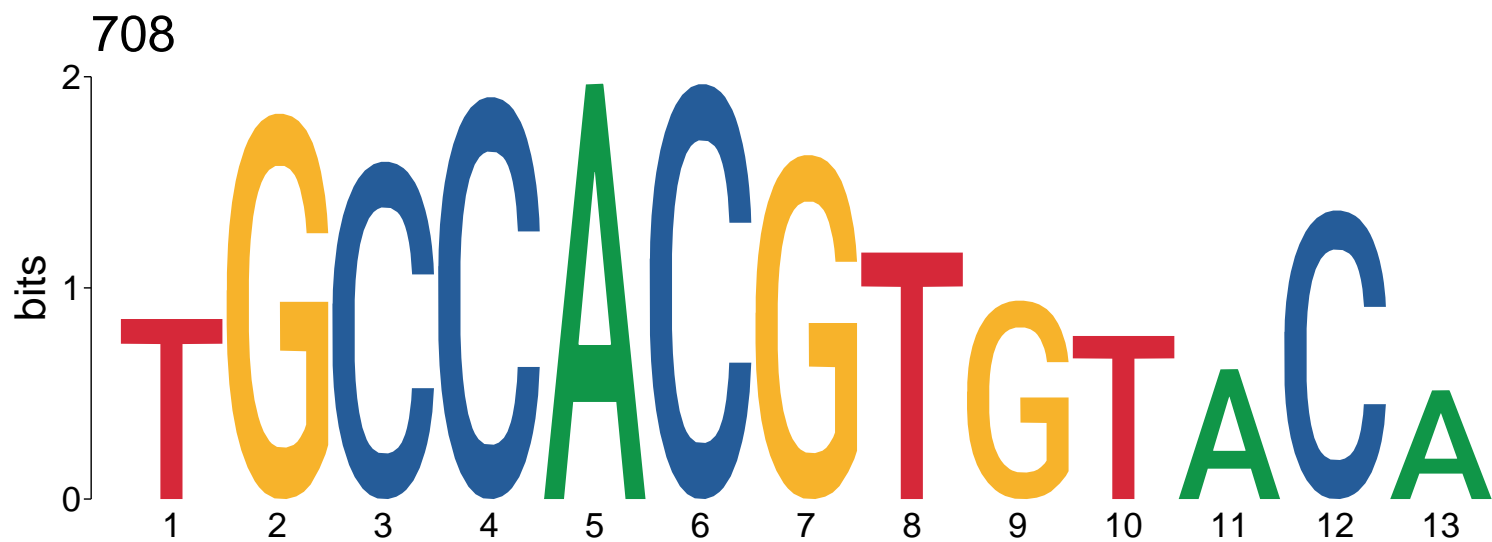


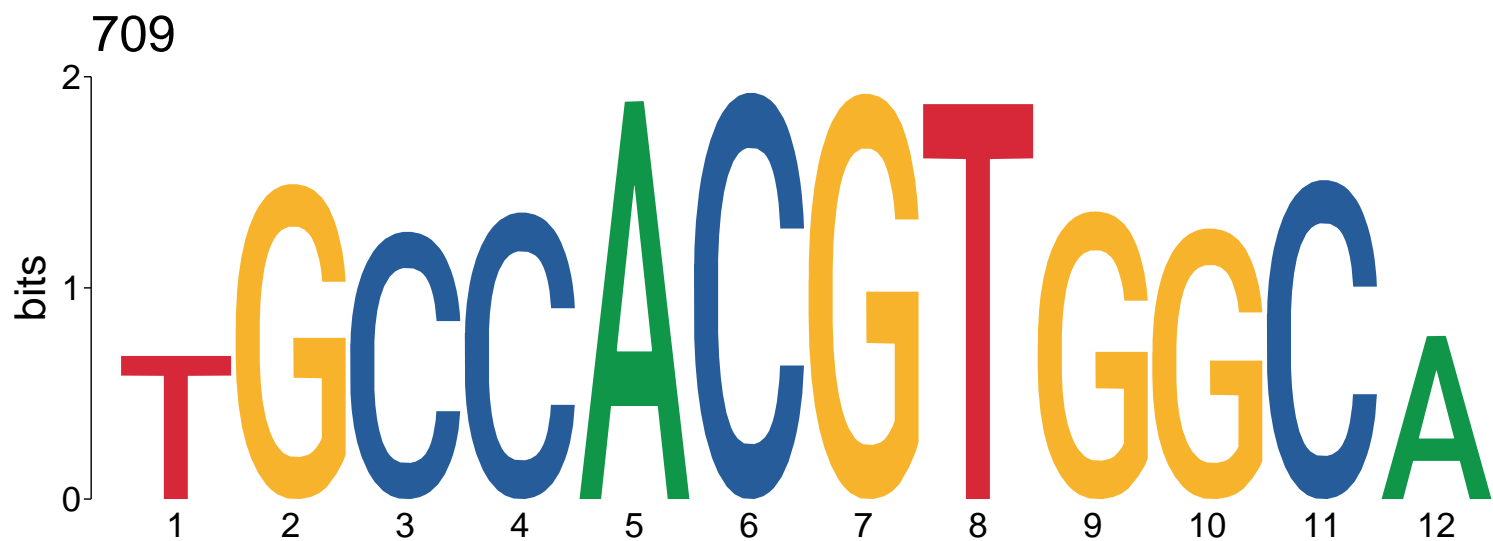
















713

2

1

0

bits

1

2

3

4

5

AACGG



A sequence logo showing the conservation of the sequence AACGG. The y-axis represents information content in bits, ranging from 0 to 2. The x-axis shows five positions, numbered 1 to 5. Position 1 is 'A', position 2 is 'A', position 3 is 'C', position 4 is 'G', and position 5 is 'G'. The letters are colored: 'A' is green, 'C' is blue, and 'G' is yellow. The total information content for the sequence is 713 bits, indicated at the top left.

Position	Letter	Information Content (bits)
1	A	~1.9
2	A	~1.9
3	C	~2.0
4	G	~1.0
5	G	~1.3

714

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

13



718

2

1

0

bits

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



719

2

1

0

bits

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18





729

2

bits

1

0

1

2

3

4

5

6

7

G

T

A

A

A

C

A

730

2

bits

1

0

1

2

3

4

5

6

7



731

2

bits

1

0

1

2

3

4

5

6

7

8

A

G

T

A

A

A

C

A

732

2

bits

1

0

1

2

3

4



733

2

1

0

bits

G

T

A

A

A

T

A

A

A

C

A

1

2

3

4

5

6

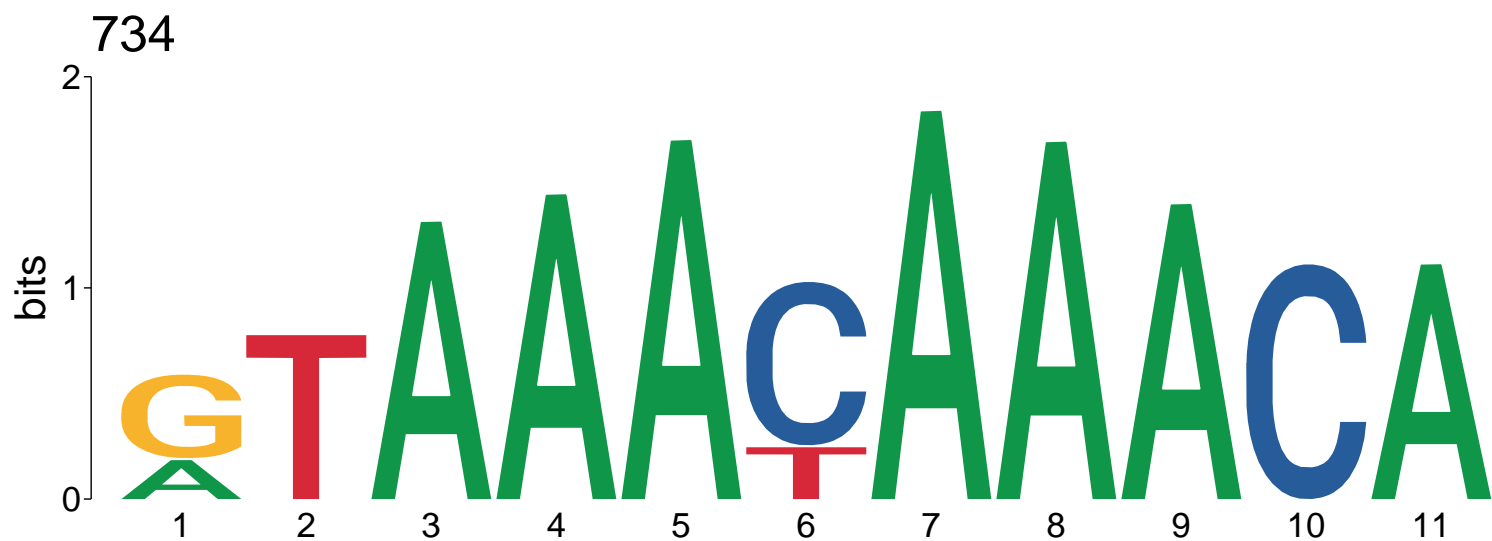
7

8

9

10

11





736

2

bits

1

0

1

2

3

4

5

6

7

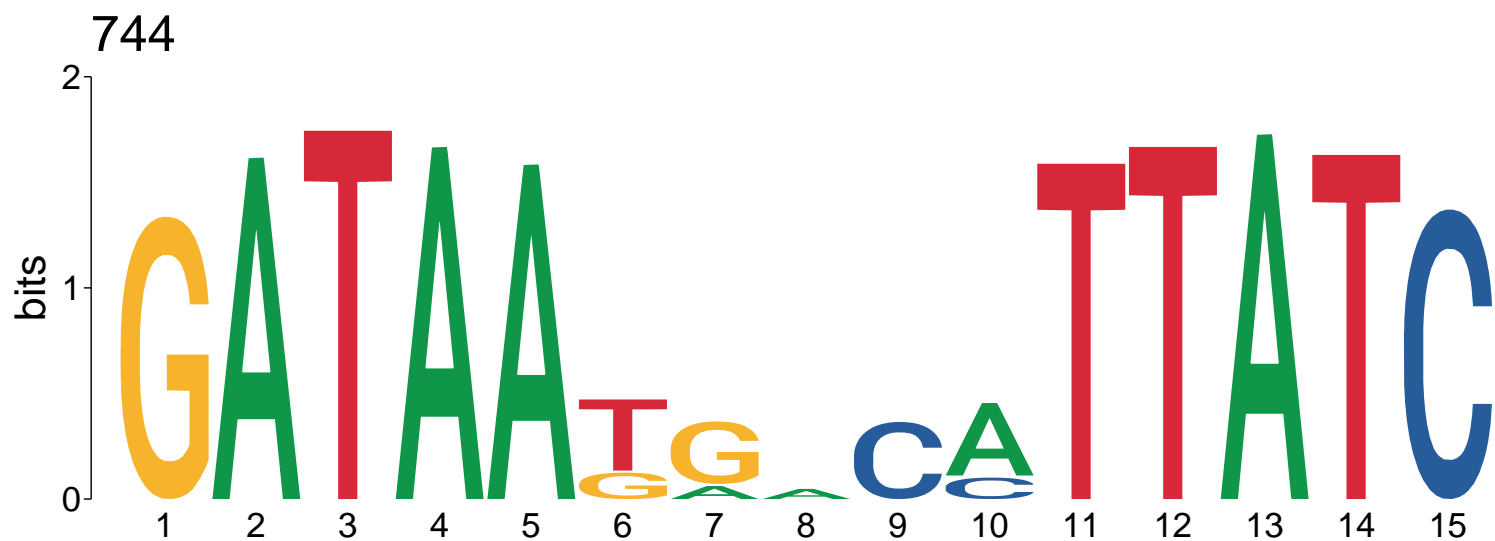
8

9



737





745

2

1

0

bits

1

2

3

4

5

6

T

G

A

A

T

T

G

A

746

2

bits

1

0

1

2

3

4

5

6

7

8

T

A

A

T

T

A
G

G

C

748

2

1

0

bits

1

2

3

4

5

6

7

A

T

A

T

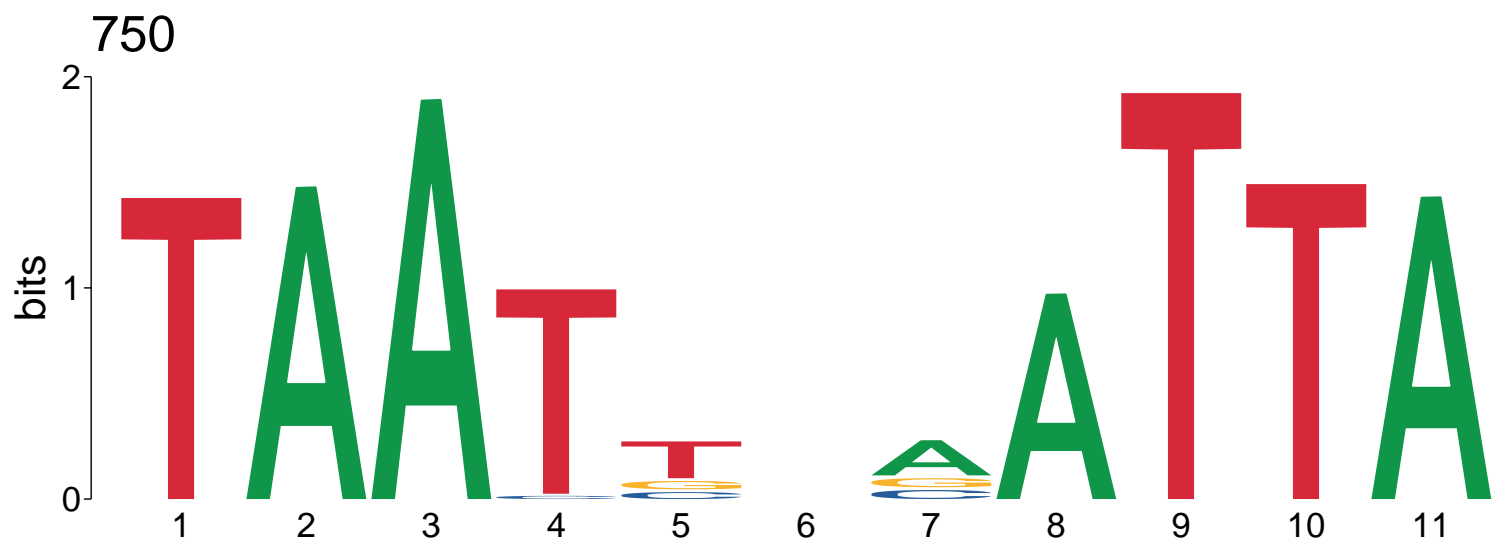
A

T

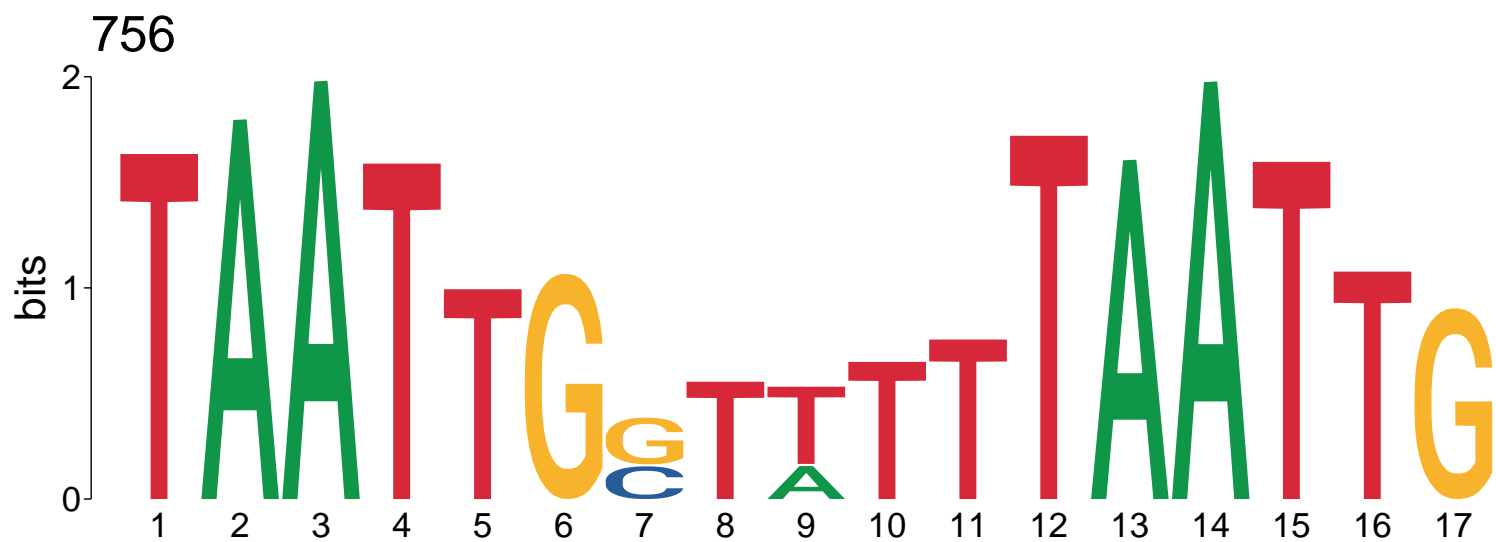
A

749

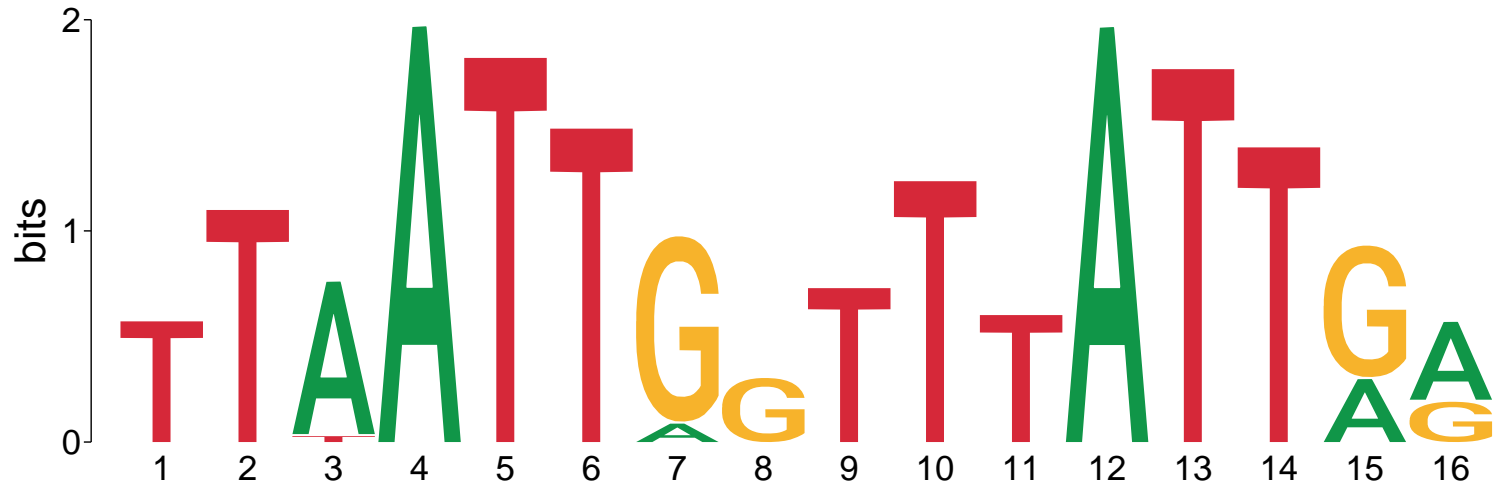








757



758

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

T A A T A G C G C T T A A T T A

T A A T A G C G C T T A A T T A

759

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

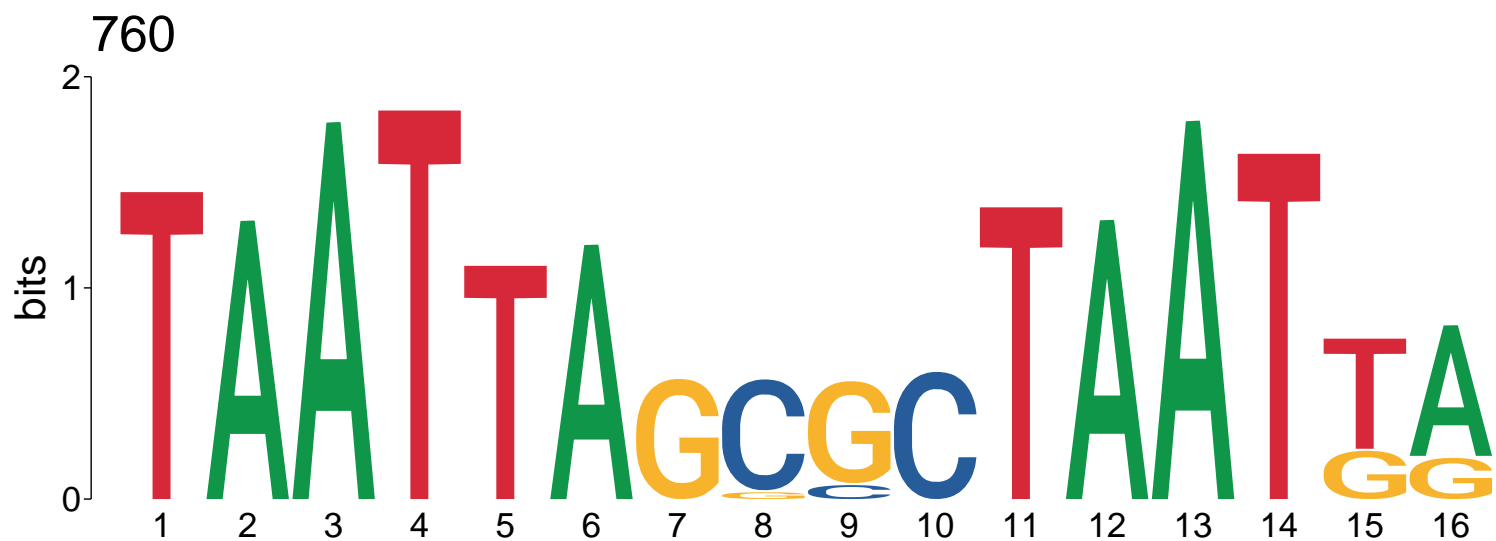
13

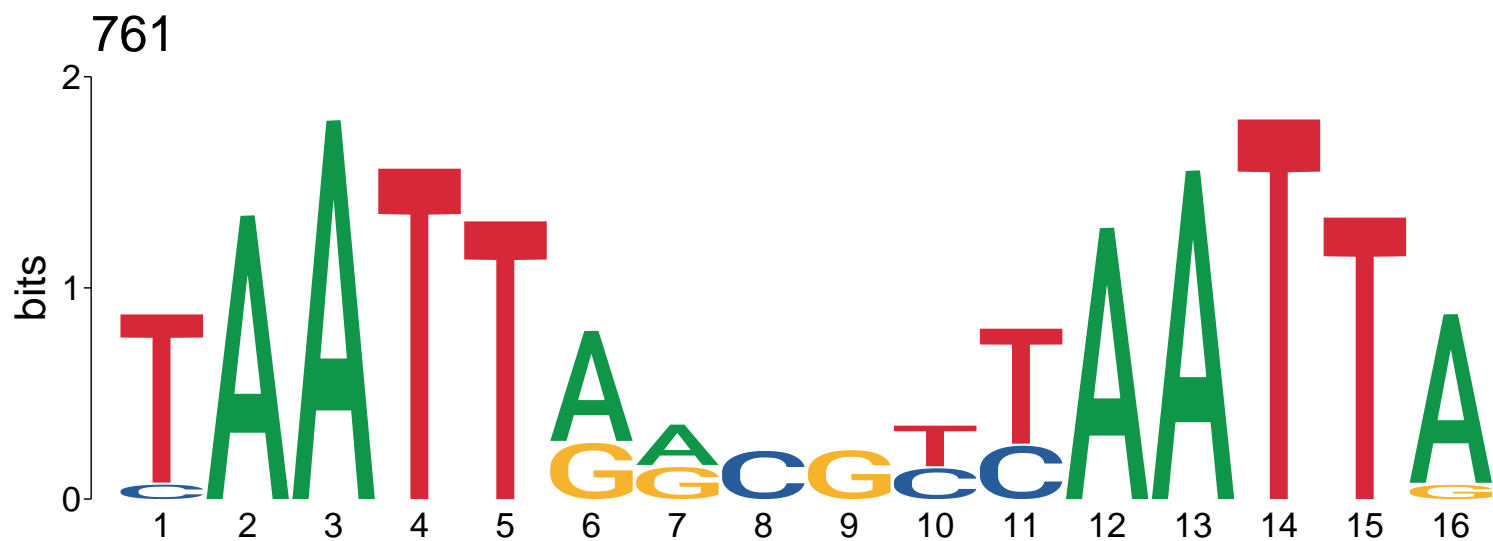
14

15

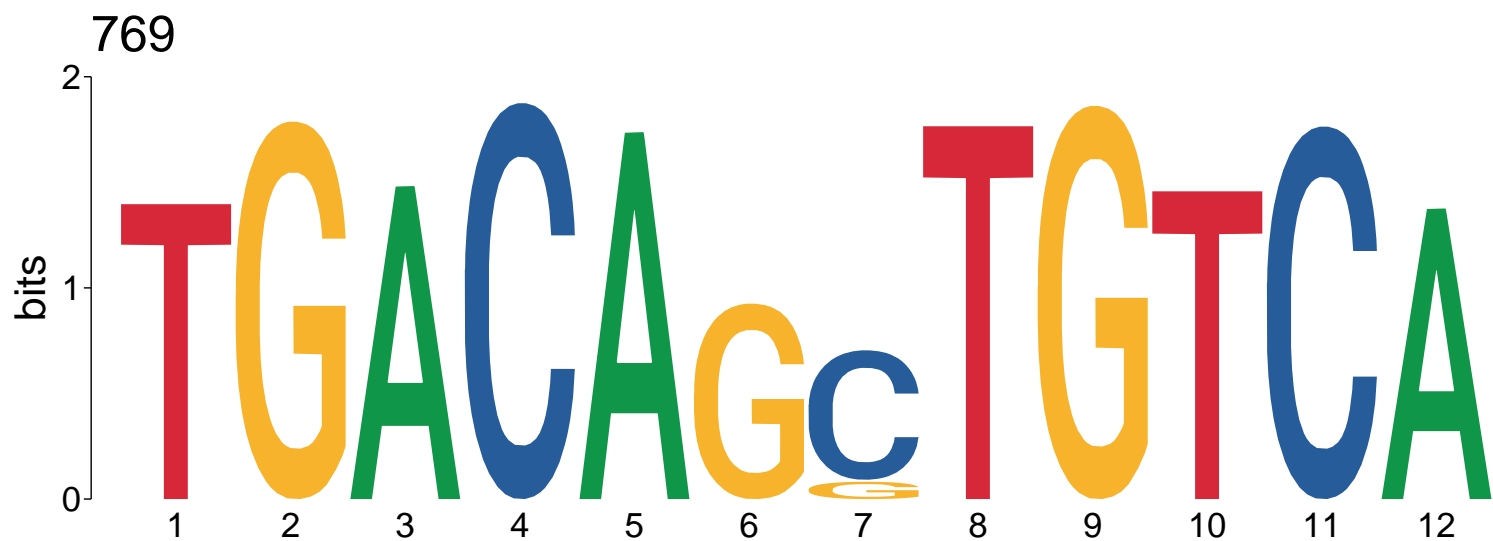
16

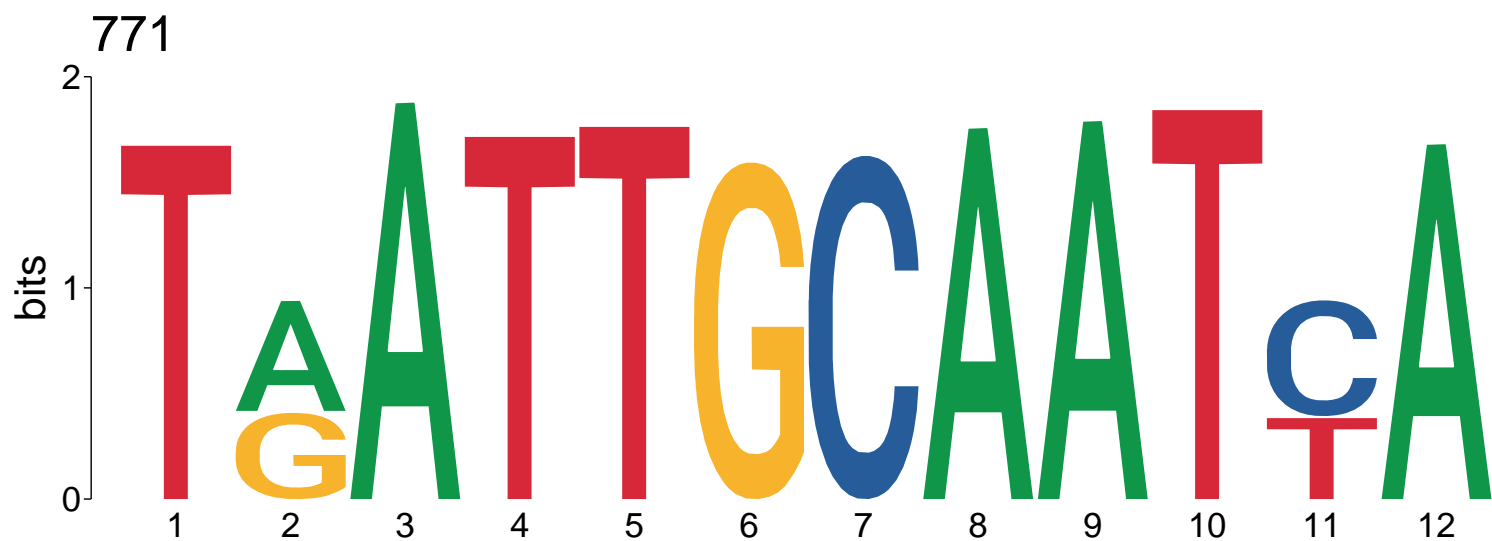












773

2

bits

1

0

1

2

3

4

5

6

7

8

9

A

T

A

A

T

C

G

G

A

T



776

2

1

0

bits

1

2

3

4

5

6

7

TGATATC

778

2

bits

1

0

1

2

3

4

5

6





782

2

bits

1

0

1

2

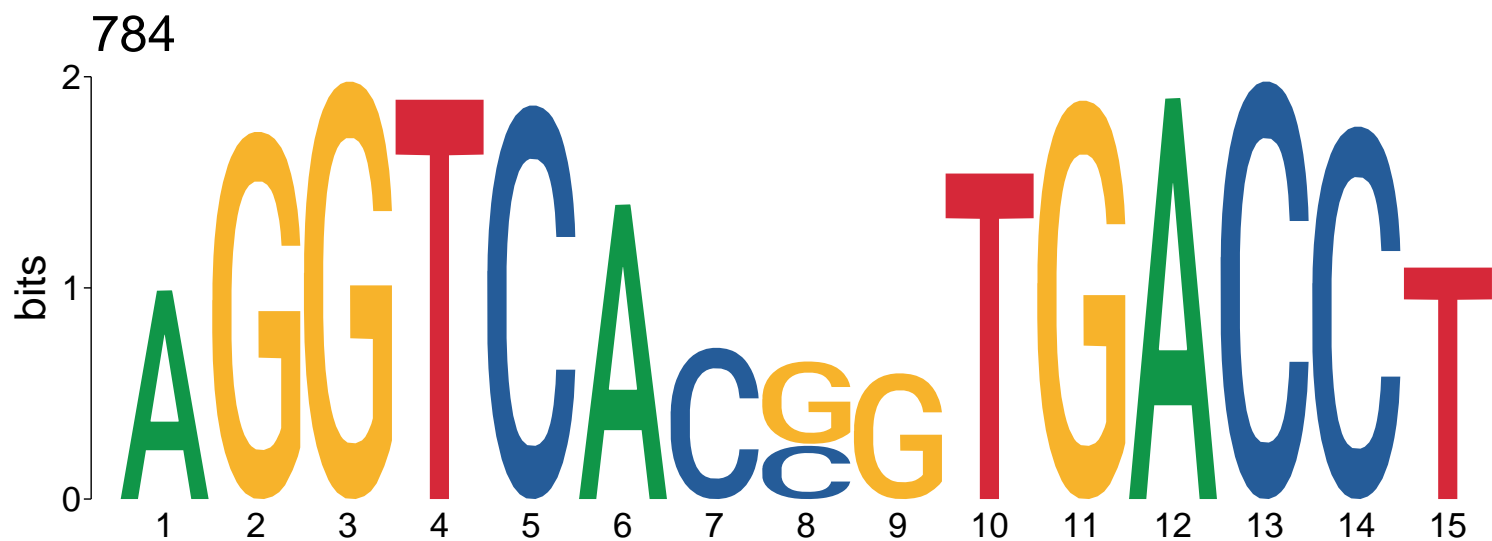
3

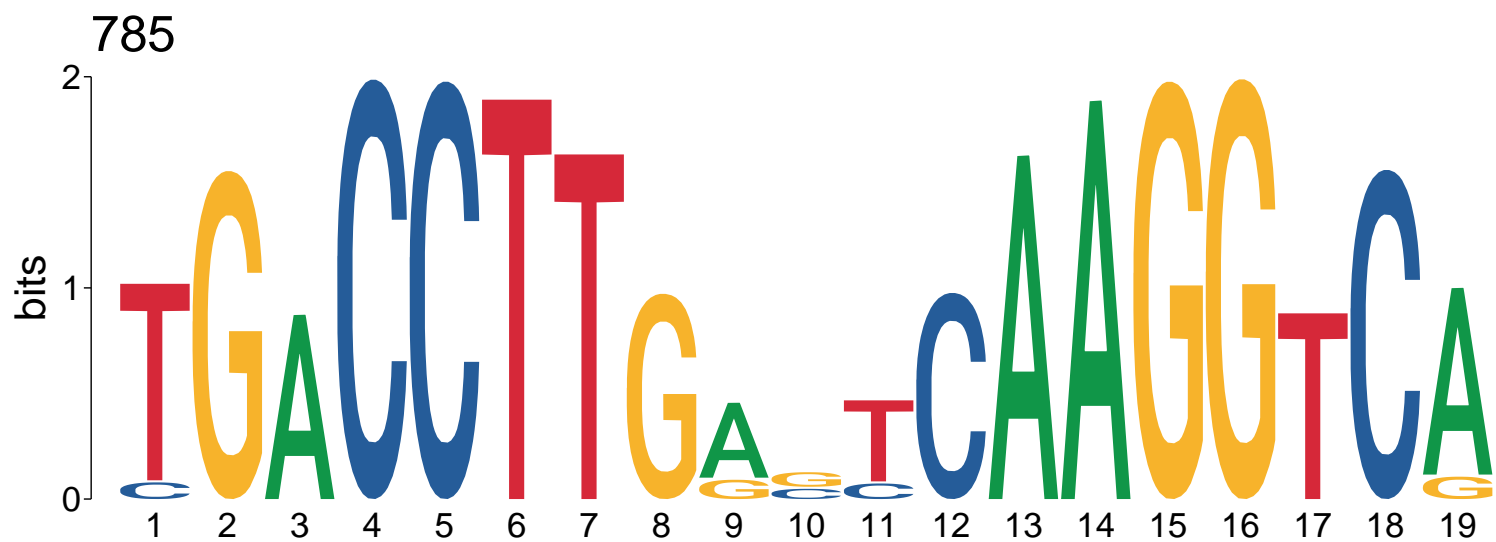
4

5

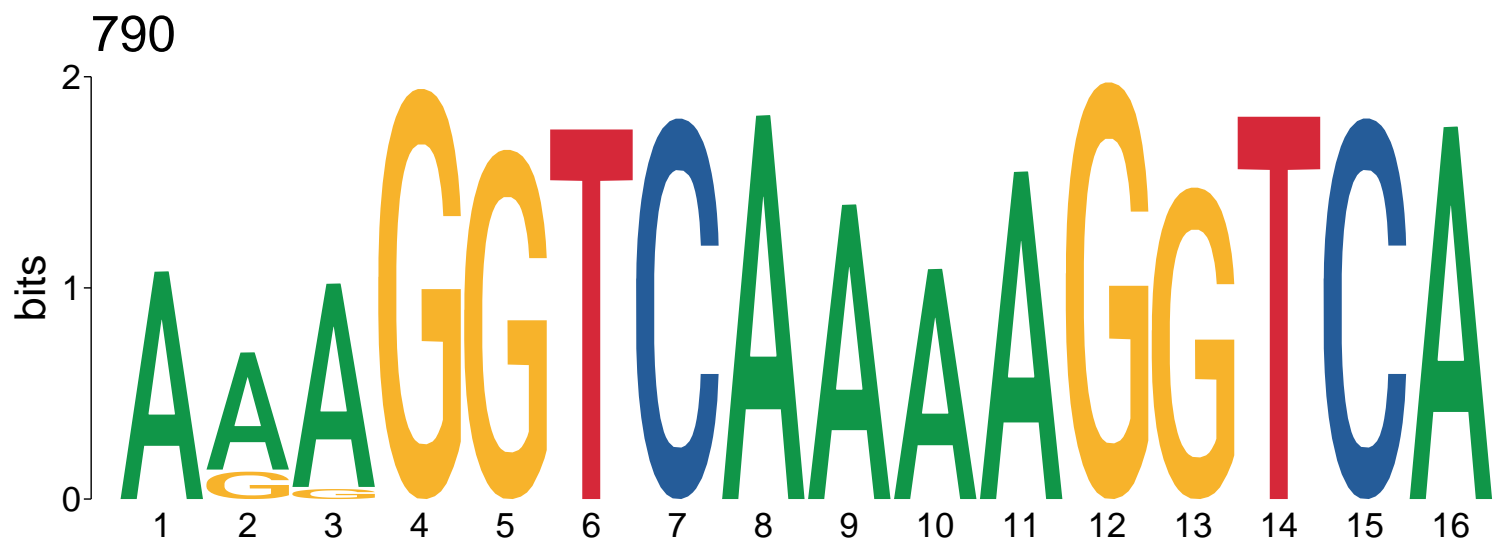
6

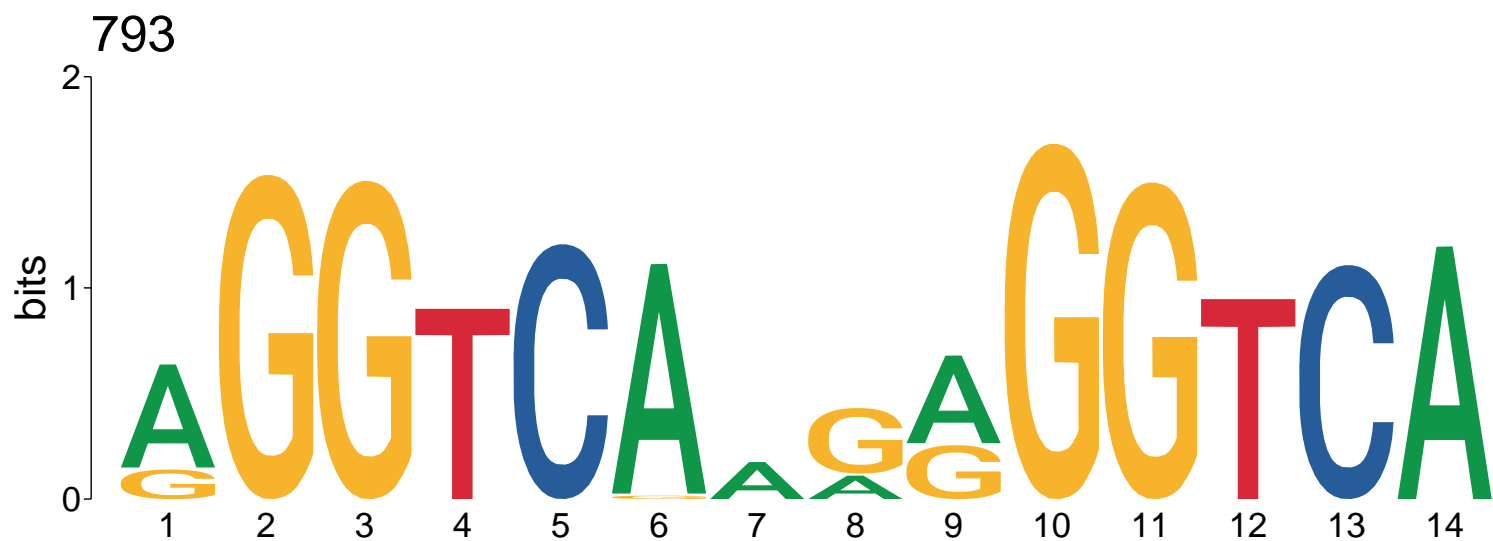
AGGGTCA





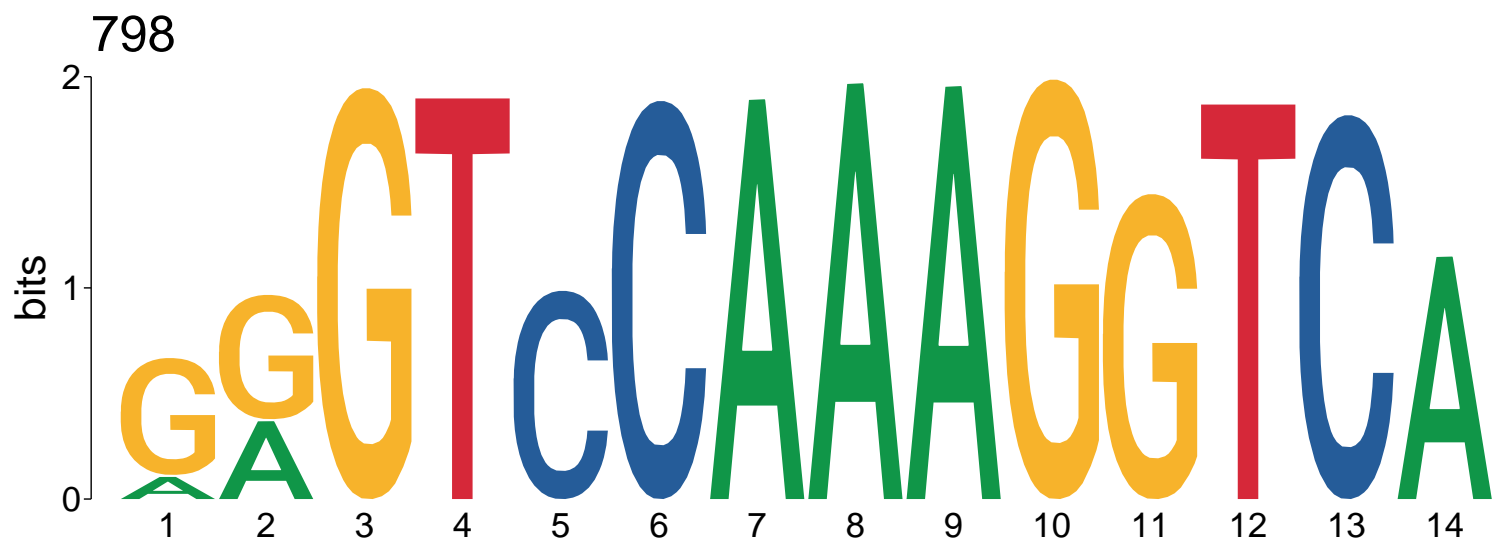












802

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14





805

2

bits

1

0

G
A

1

2

G
A

3

G
G

4

G
G

5

T

6

C

7

A

8

C
T

9

G

10

A

11

C

12

C

13

T
C

14

C
T

810

2

1

0

bits

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



811

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

G

A

G

G

T

C

A

G

A

C

C

T

C

812

2

bits

1

0

1 2 3 4

The image displays a sequence of four large, stylized letters: 'G' (yellow), 'T' (red), 'C' (blue), and 'A' (green). Each letter is positioned above a small number (1, 2, 3, 4 respectively). A vertical axis on the left is labeled 'bits' and has tick marks at 0, 1, and 2. The number '812' is at the top left.

813

2

bits

1

0

G

1

T

2

C

3

A

4

814

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

AAGTCAAGTCA

815

2

1

0

bits

1

2

3

4

5

6

7

8



816

2

bits

1

0

1

2

3

4

5

6

7



818



820

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

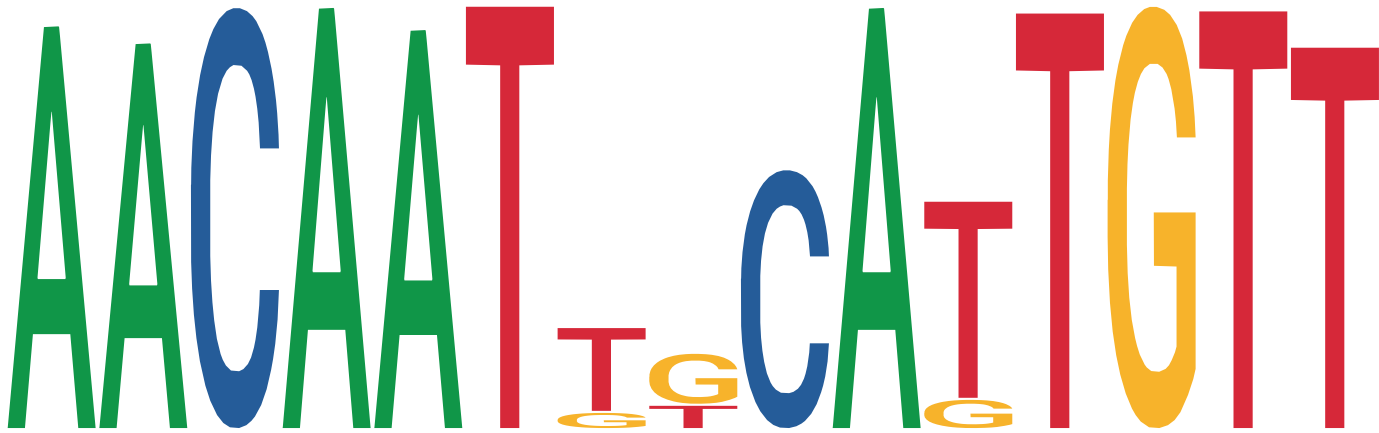
11

12

13

14

15



822

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

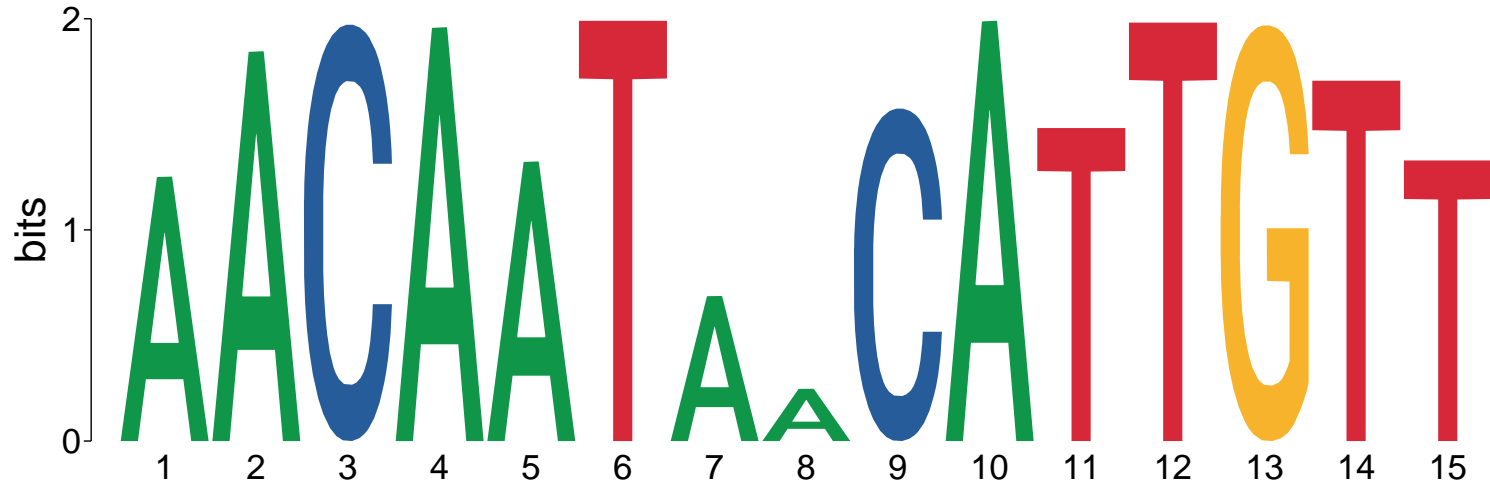
13

14

15



825



826



833

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

A

C

C

G

A

A

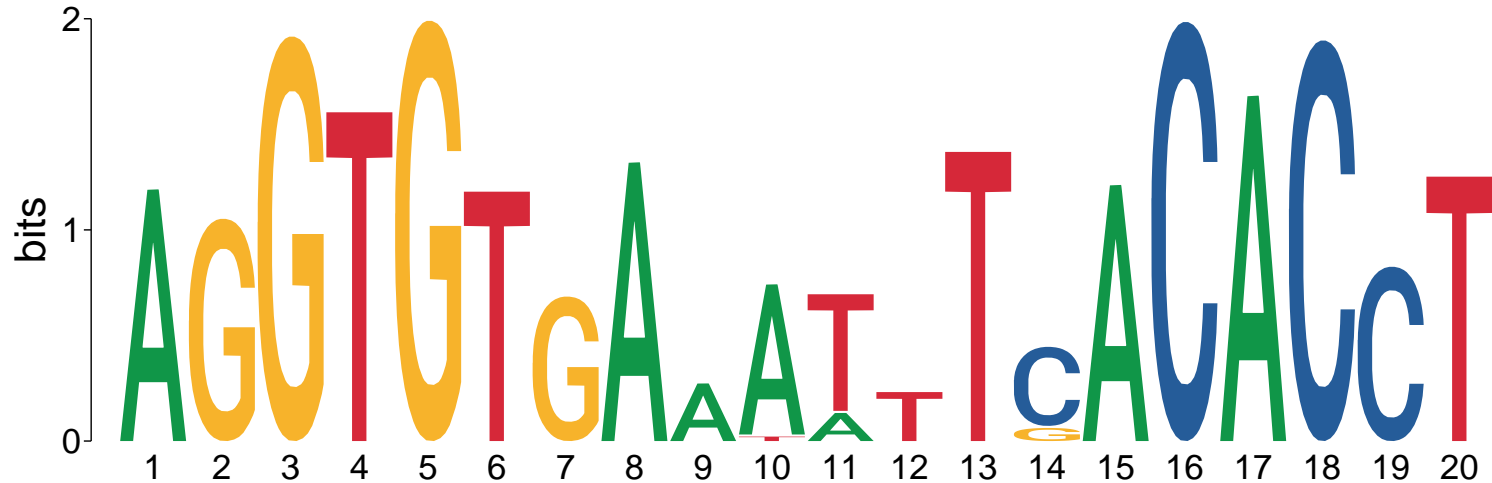
C

A

A

T

836



837

2

1

0

bits

1

2

3

4

5

6

7

8

9

10

11

12

13

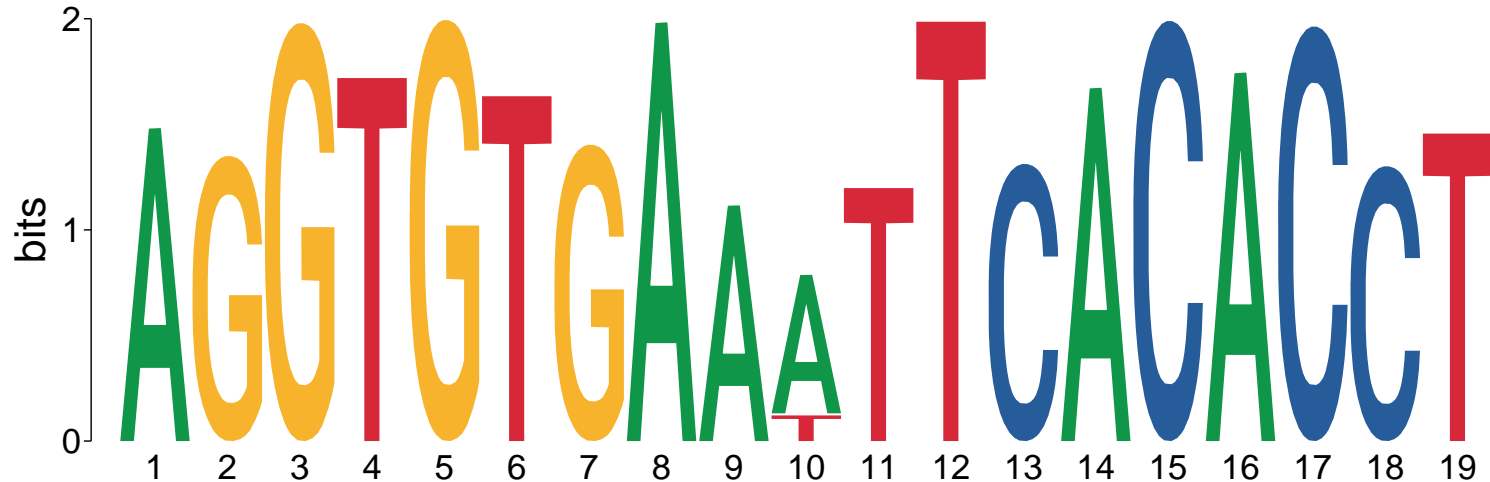
14

15

16



838



839

2

bits

1

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17



840

2

bits

0

1

2

3

4

5

6

7

8

9

10

11

12

13

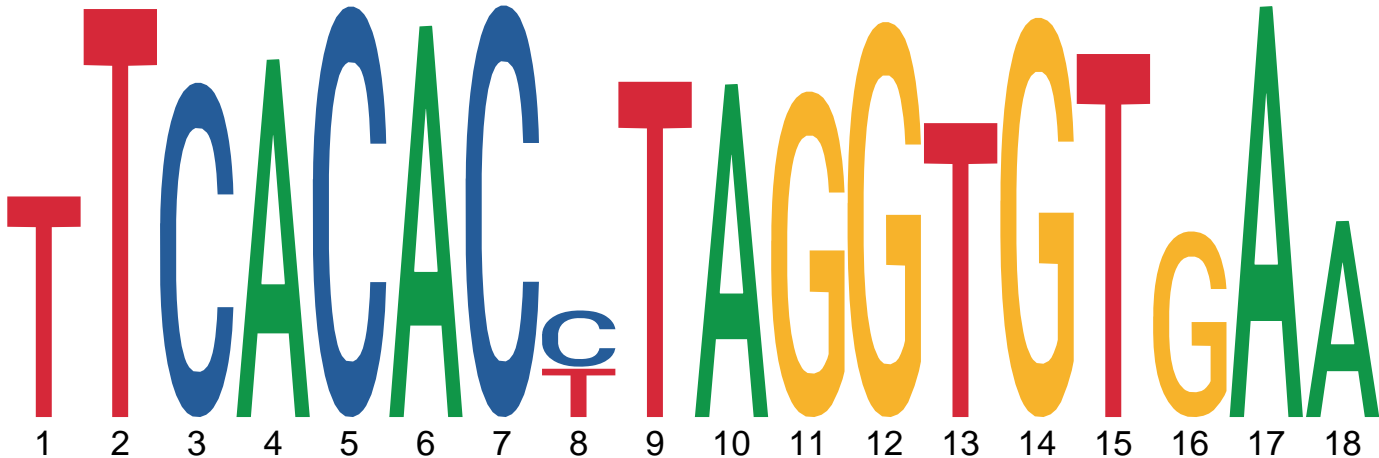
14

15

16

17

18



842

2

bits

0

1

2

3

4

5

6

7

8

9



844

2

bits

1

0

1

2

3

4

5

6

7

8

9

A G G T G T G A A

846

2

bits

1

0

1

2

3

4

5

6

7

8

9

10



847

2

bits

1

0

1

2

3

4

5

6

7

8

A

T

T

C

A

A

A

T

848

2

bits

1

0

1

2

3

4

5

6

7

8

9

