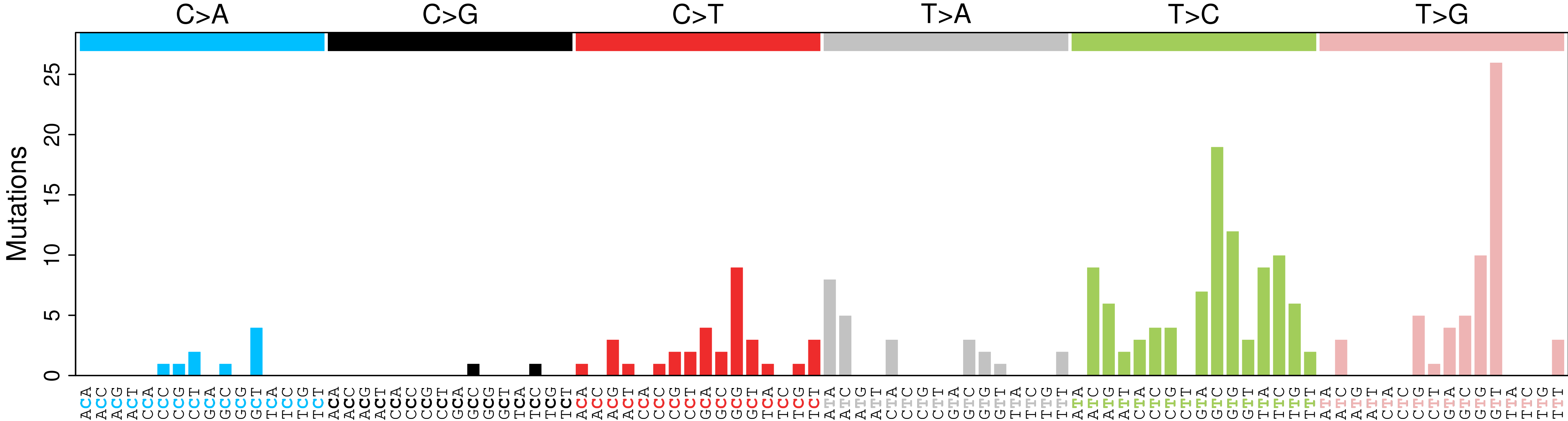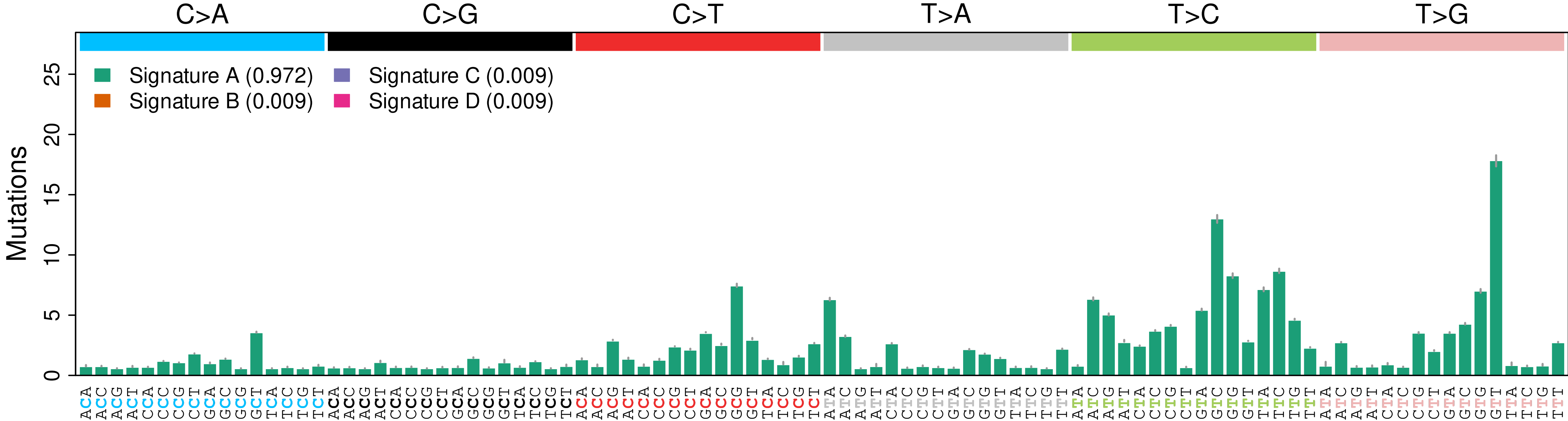**CATD0735a (221 mutations)**
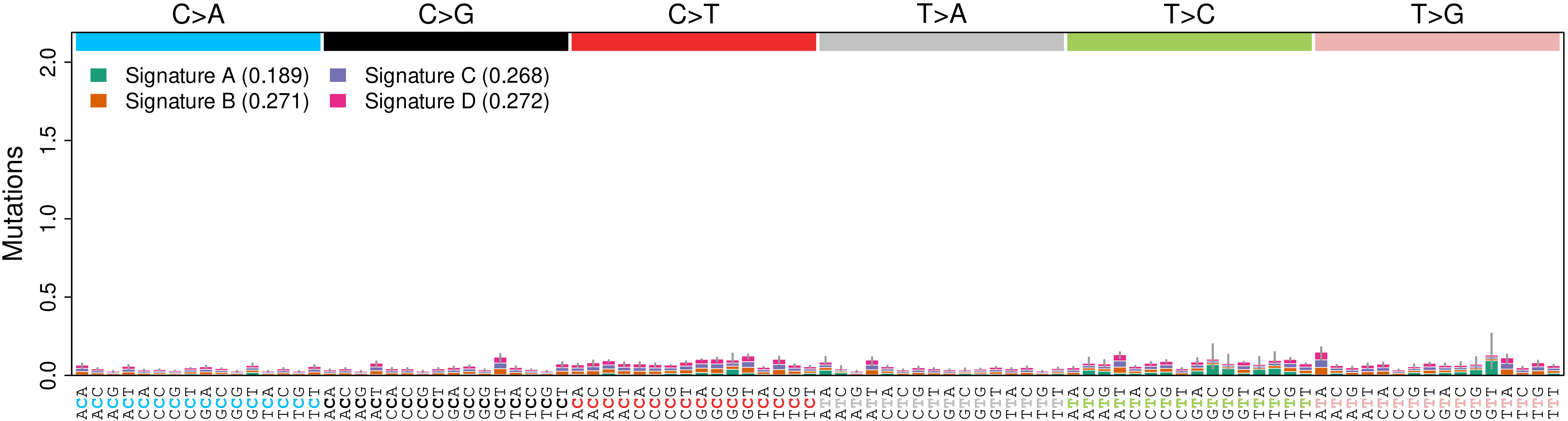
Reconstructed spectrum (cosine similarity = 0.978)
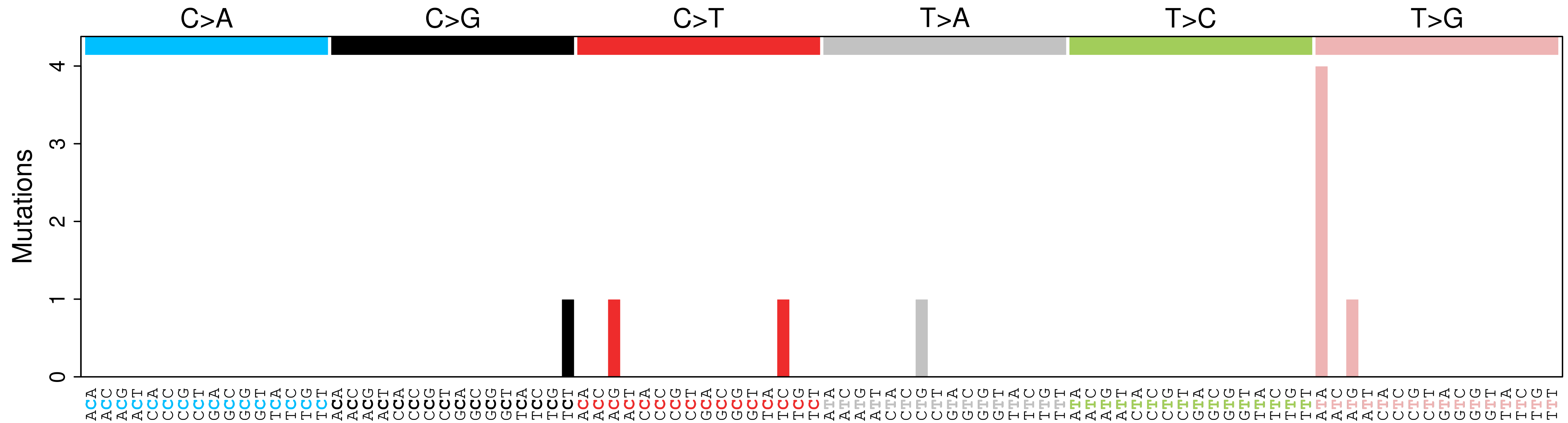
Signature A (0.972) Signature C (0.009)
Signature B (0.009) Signature D (0.009)

CATD0575a (6 mutations)

Reconstructed spectrum (cosine similarity = 0.236)

Signature A (0.189)   Signature C (0.268)
Signature B (0.271)   Signature D (0.272)

CATD0584a (9 mutations)

Reconstructed spectrum (cosine similarity = 0.34)

Signature A (0.098)   Signature C (0.305)
Signature B (0.292)   Signature D (0.306)

CATD0600a (12 mutations)

Reconstructed spectrum (cosine similarity = 0.383)

Signature A (0.288) Signature C (0.238)
Signature B (0.236) Signature D (0.237)

CATD0576a (8 mutations)

Reconstructed spectrum (cosine similarity = 0.325)

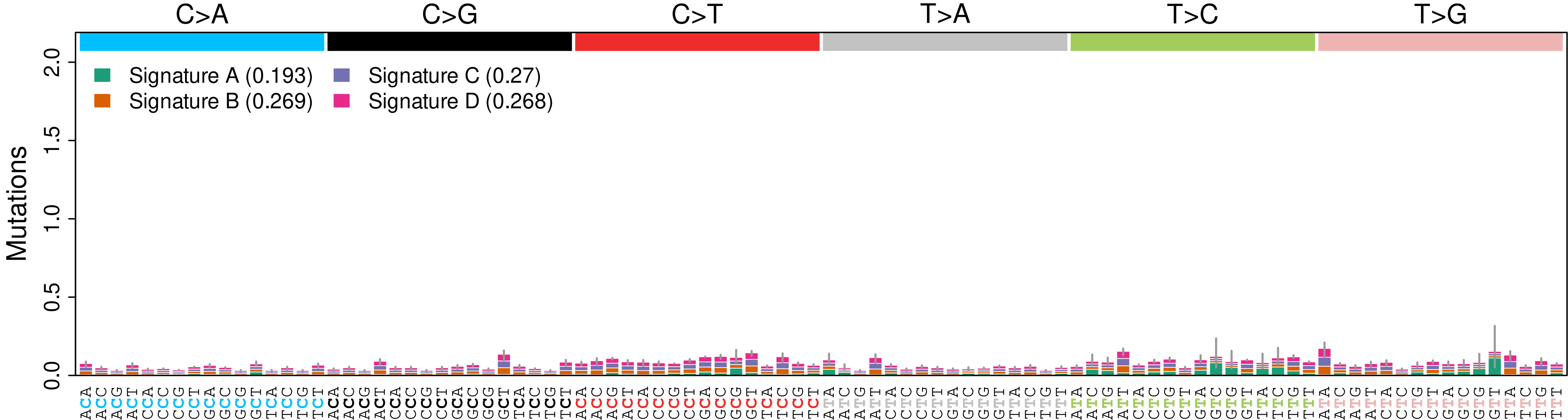Signature A (0.152)
Signature B (0.282)
Signature C (0.284)
Signature D (0.281)
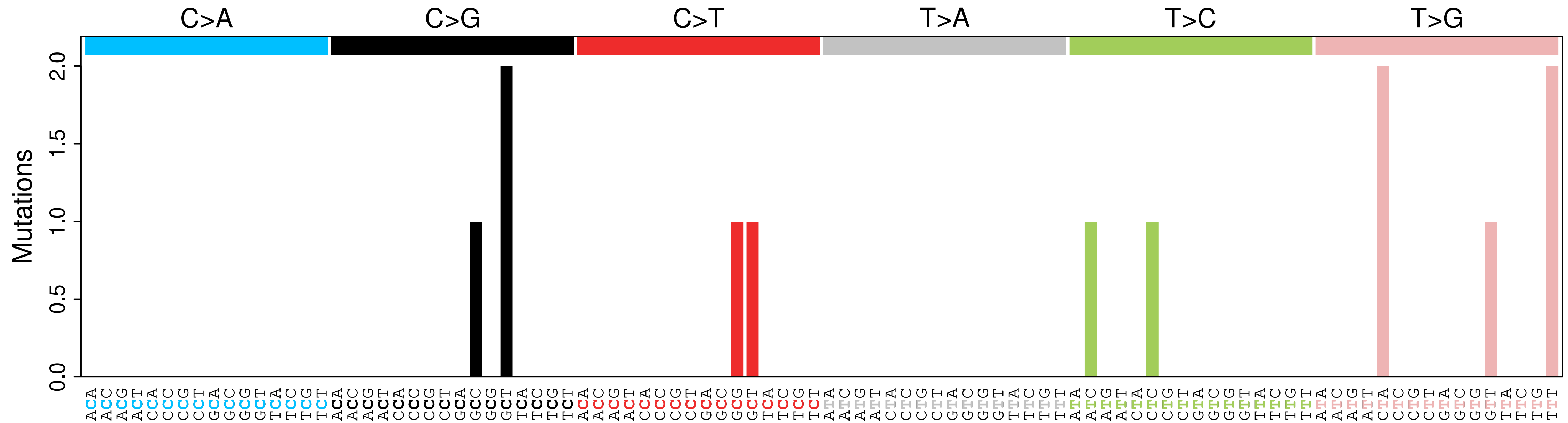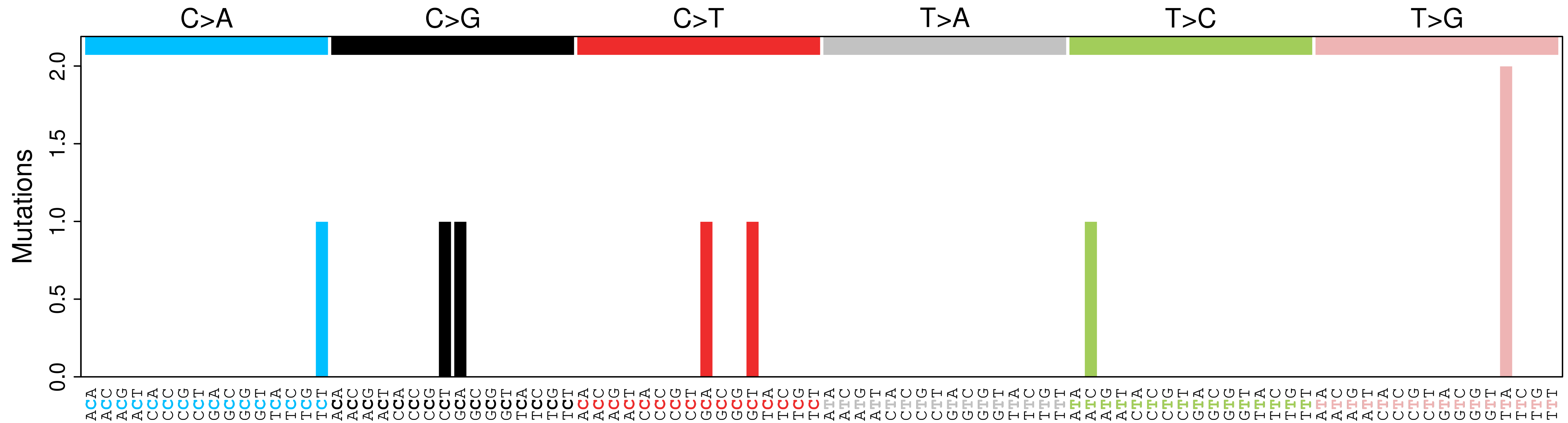
CATD0679a (6 mutations)

Reconstructed spectrum (cosine similarity = 0.307)

Signature A (0.193) Signature C (0.27)
Signature B (0.269) Signature D (0.268)
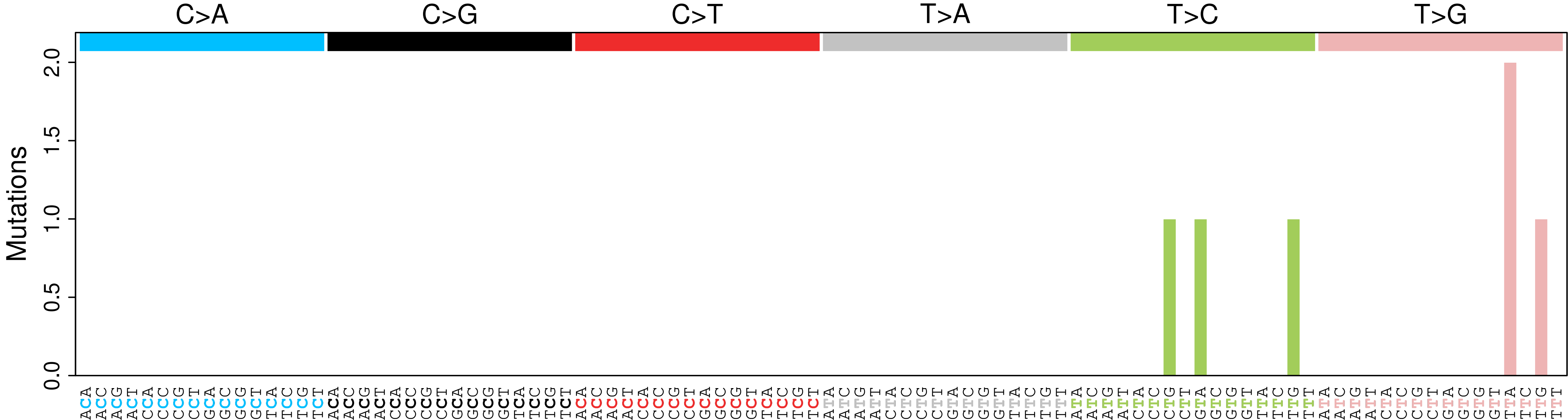
CATD0591a (18 mutations)

Reconstructed spectrum (cosine similarity = 0.444)

Signature A (0.368) Signature C (0.209)
Signature B (0.212) Signature D (0.211)
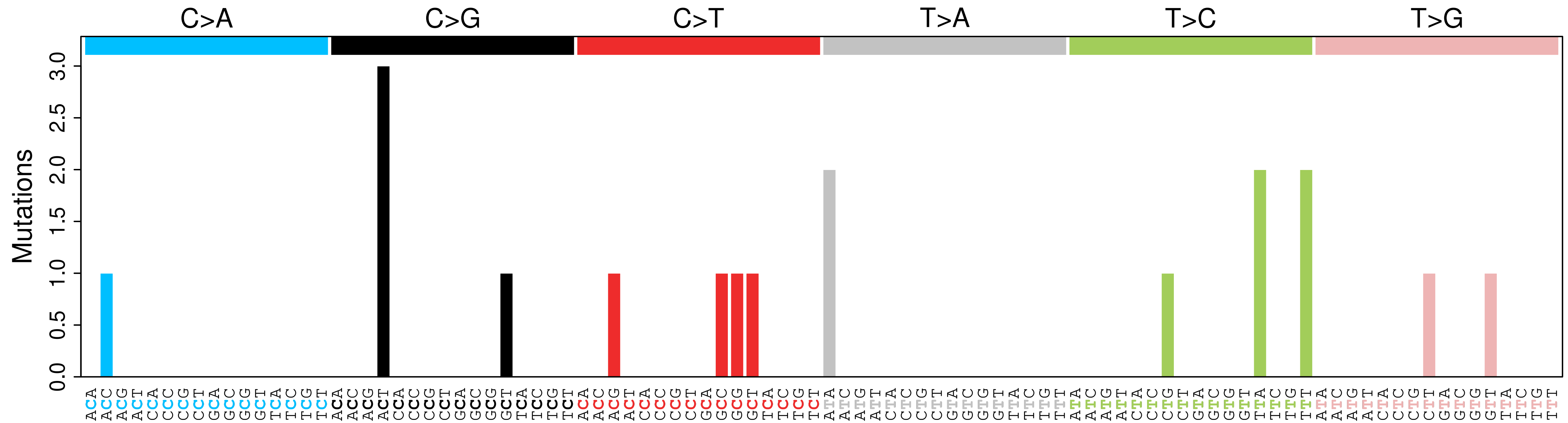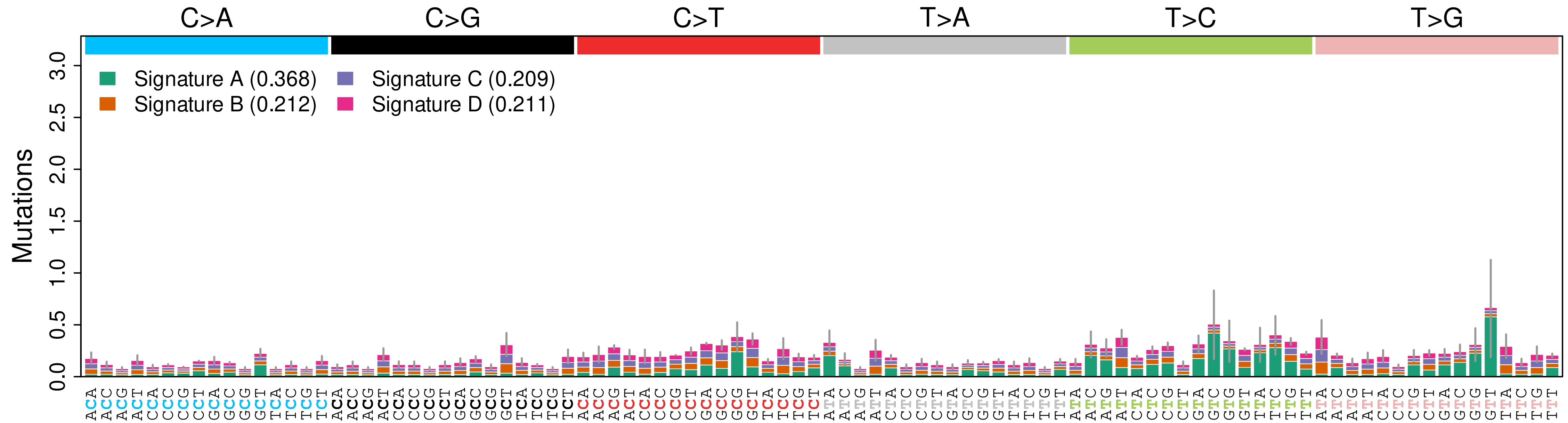
CATD0686a (14 mutations)

Reconstructed spectrum (cosine similarity = 0.432)

Signature A (0.297)   Signature C (0.234)
Signature B (0.236)   Signature D (0.233)

CATD0734a (25 mutations)

Reconstructed spectrum (cosine similarity = 0.518)

Signature A (0.116)   Signature C (0.295)
Signature B (0.298)   Signature D (0.291)
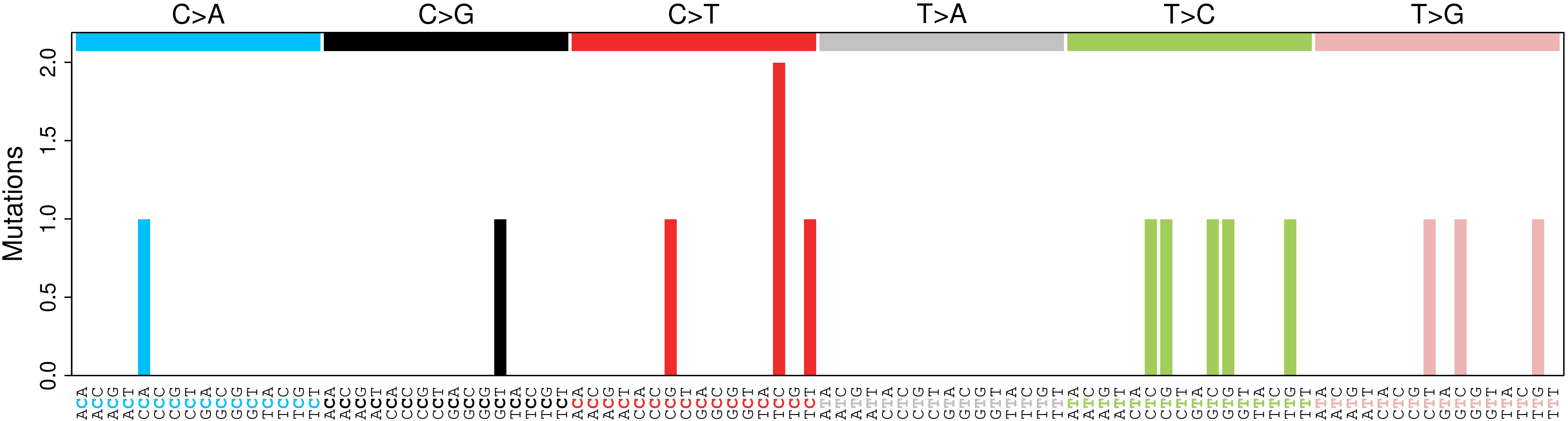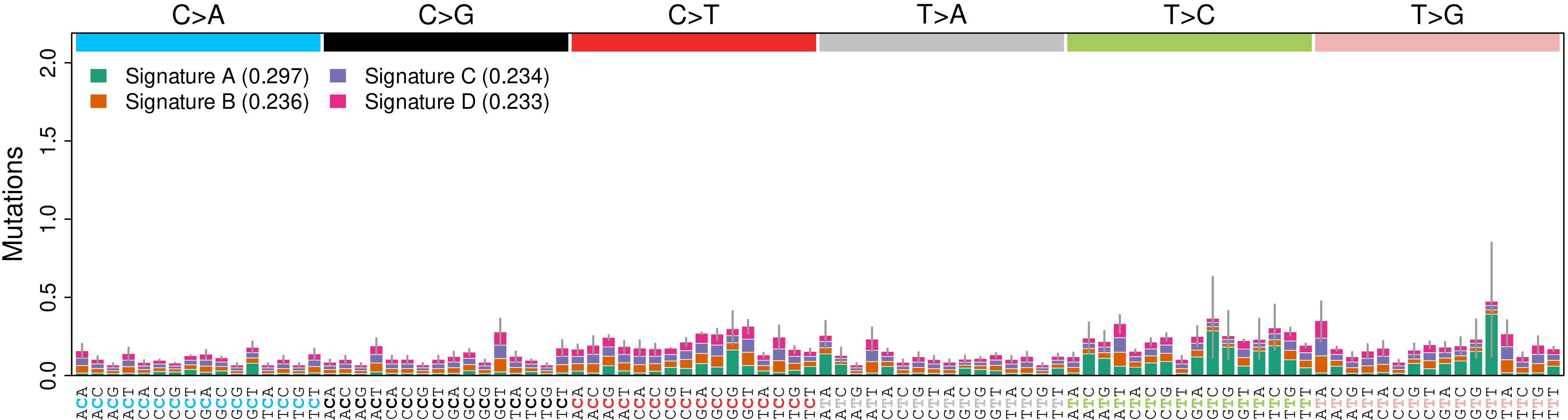
CATD0678a (7 mutations)

Reconstructed spectrum (cosine similarity = 0.225)

Signature A (0.134)   Signature C (0.284)
Signature B (0.289)   Signature D (0.292)
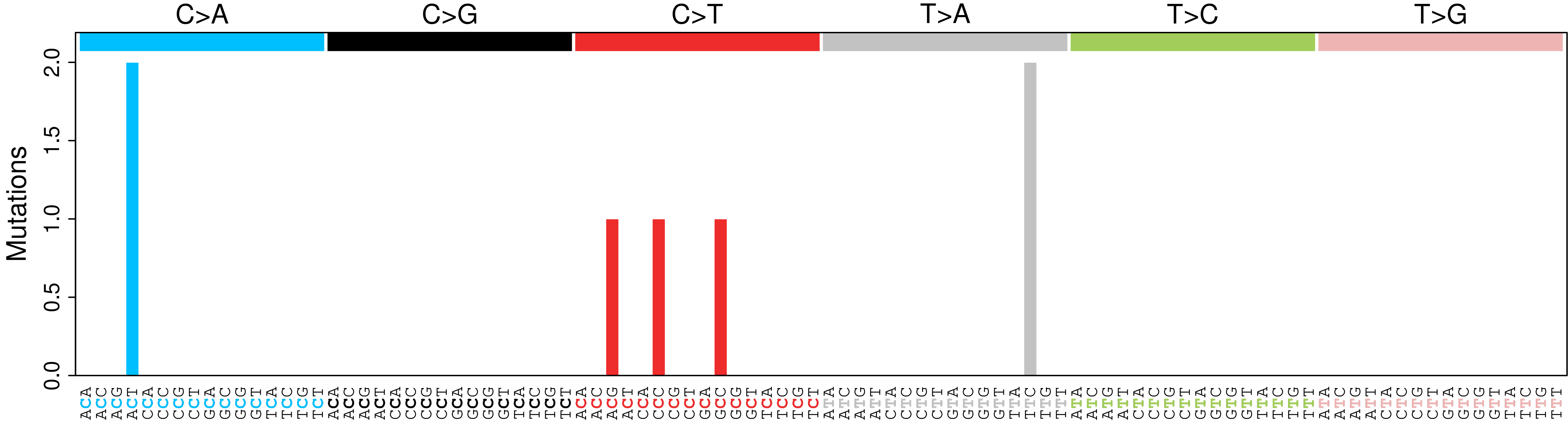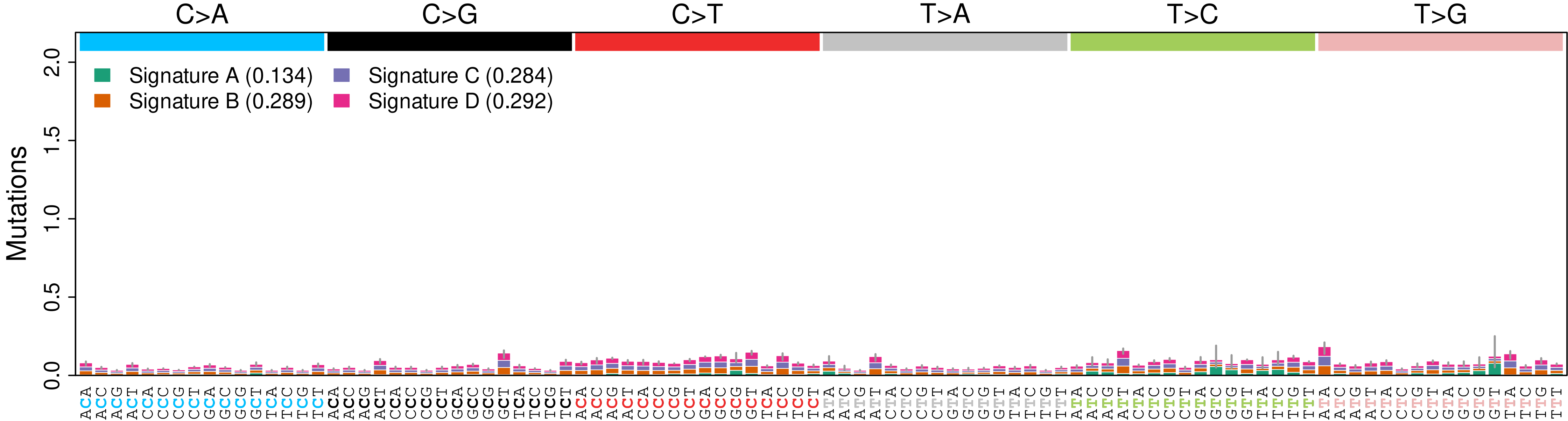
CATD0729a (27 mutations)

Reconstructed spectrum (cosine similarity = 0.465)

Signature A (0.131) Signature C (0.306)
Signature B (0.275) Signature D (0.288)

CATD0609a (11 mutations)

Reconstructed spectrum (cosine similarity = 0.417)

Signature A (0.119)   Signature C (0.296)
Signature B (0.289)   Signature D (0.296)

CATD0601a (12 mutations)

Reconstructed spectrum (cosine similarity = 0.387)

Signature A (0.124) Signature C (0.29)
Signature B (0.295) Signature D (0.291)

CATD0731a (14 mutations)

Reconstructed spectrum (cosine similarity = 0.429)

Signature A (0.087)   Signature C (0.307)
Signature B (0.298)   Signature D (0.308)

CATD0723a (20 mutations)

Reconstructed spectrum (cosine similarity = 0.551)

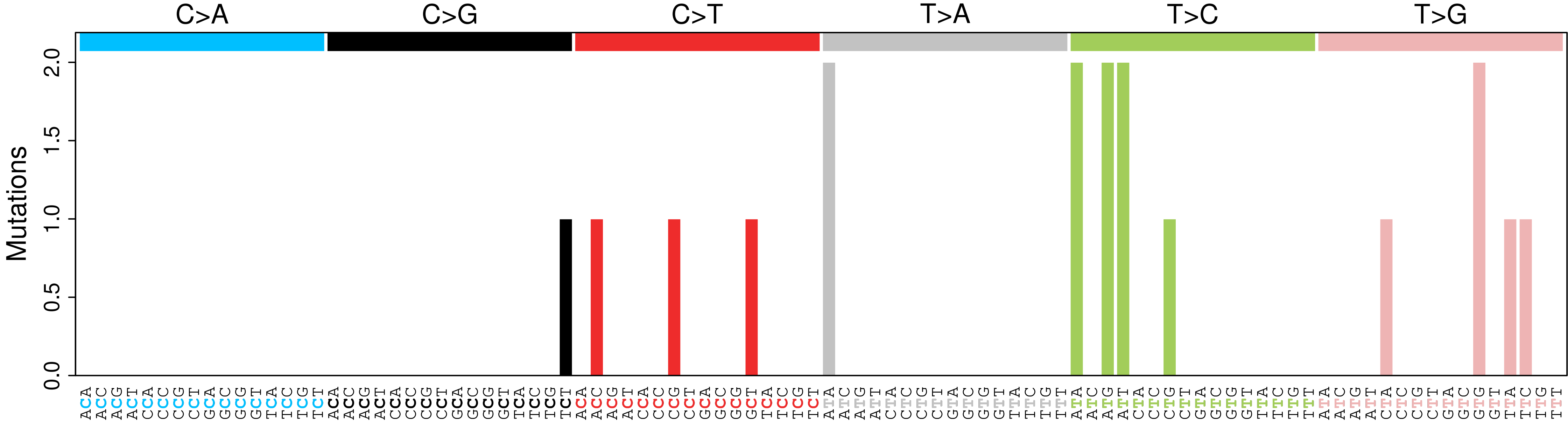Signature A (0.401)   Signature C (0.206)
Signature B (0.193)   Signature D (0.2)
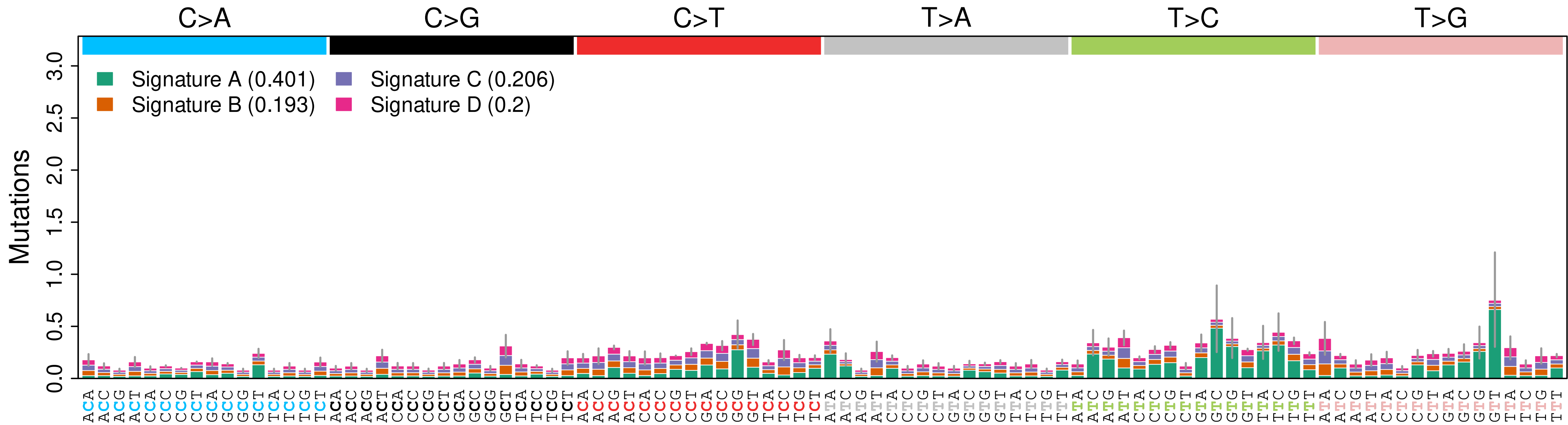
CATD0730a (9 mutations)

Reconstructed spectrum (cosine similarity = 0.302)

Signature A (0.32) Signature C (0.225)
Signature B (0.227) Signature D (0.228)
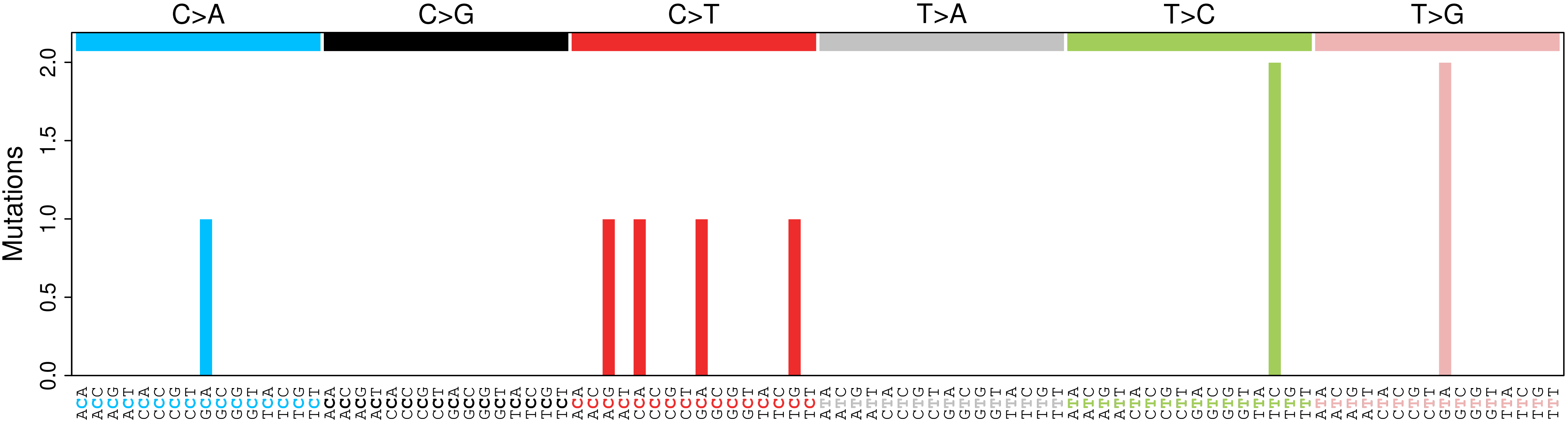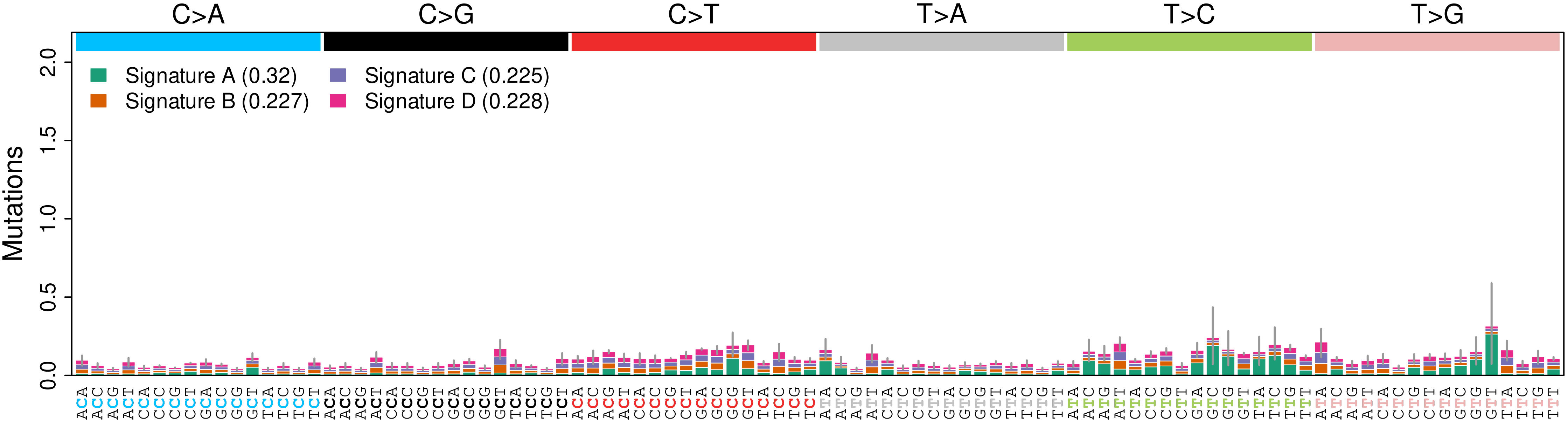
CATD0586a (18 mutations)

Reconstructed spectrum (cosine similarity = 0.418)

Signature A (0.255)
Signature B (0.248)
Signature C (0.253)
Signature D (0.244)

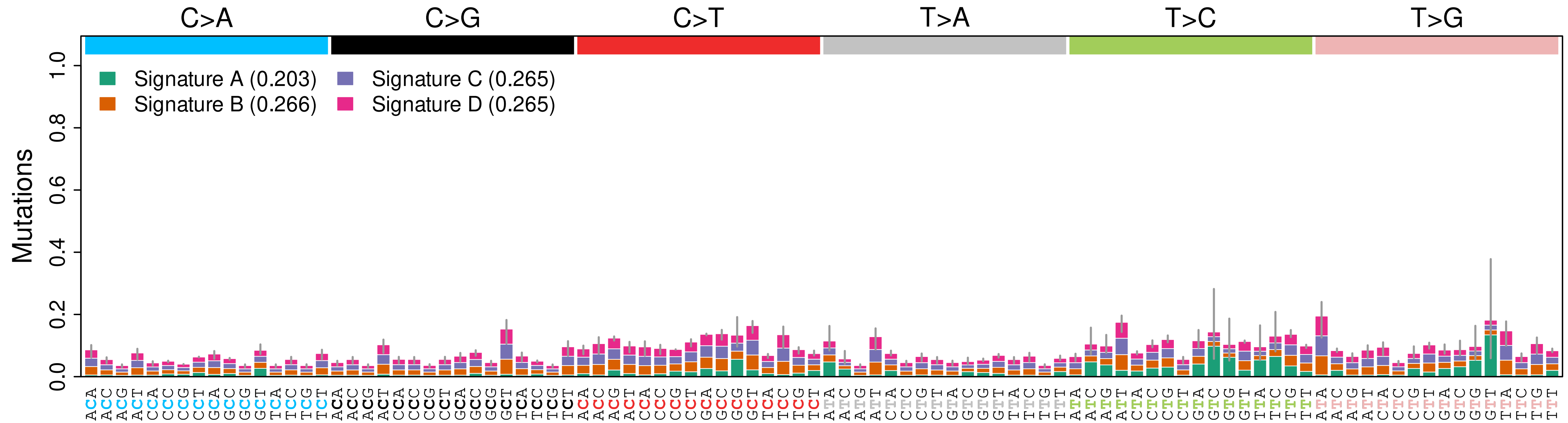**CATD0733a (9 mutations)**

Reconstructed spectrum (cosine similarity = 0.447)

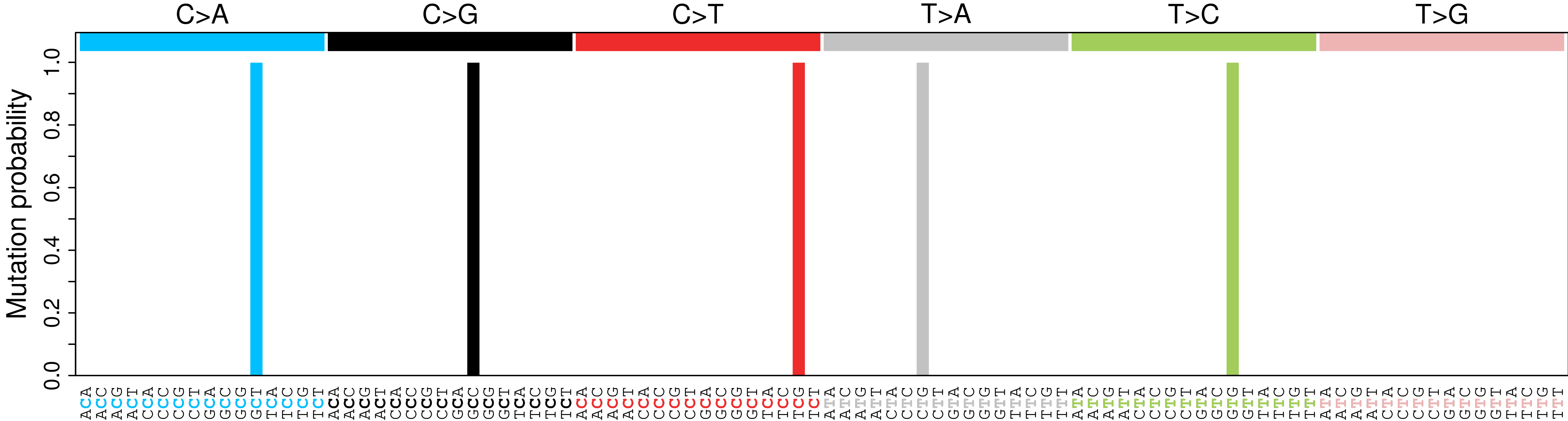Signature A (0.615)   Signature C (0.128)
Signature B (0.128)   Signature D (0.129)
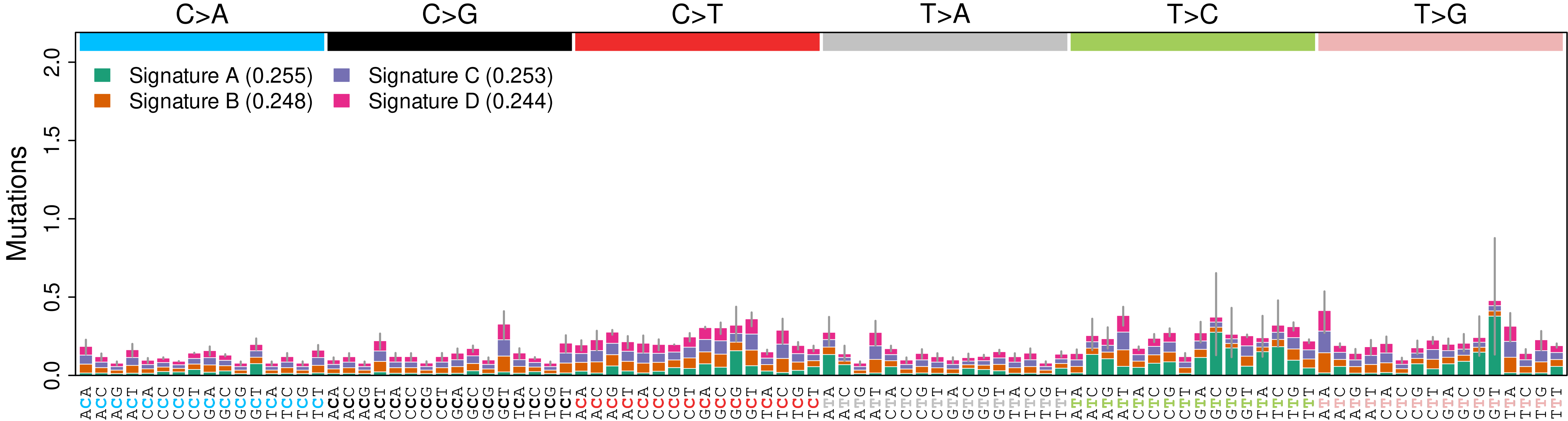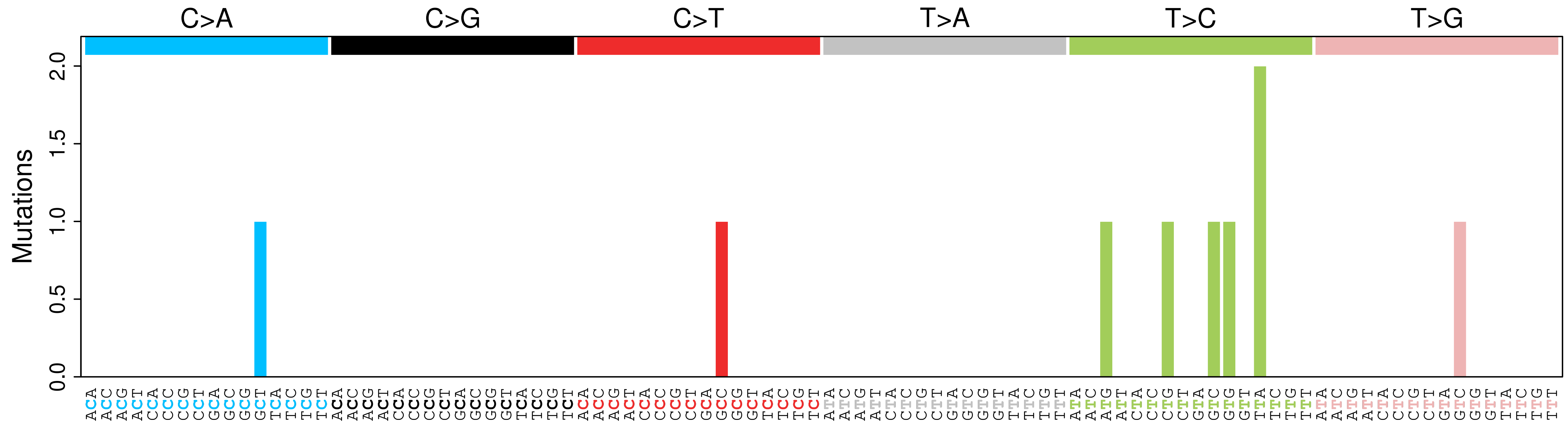
CATD0687a

Reconstructed spectrum (cosine similarity = 0.215)
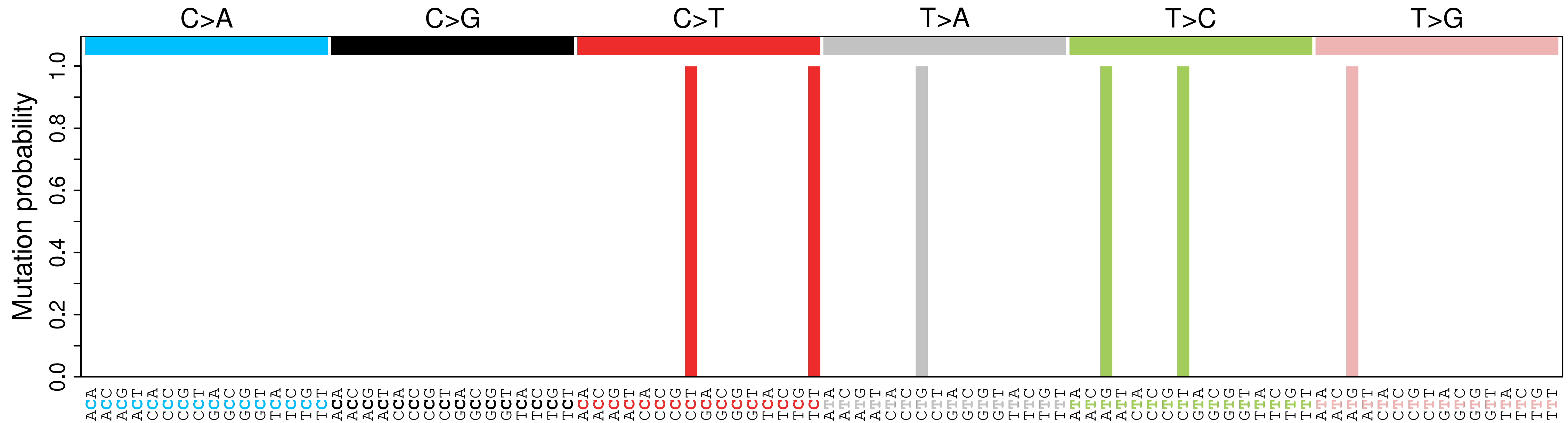
Signature A (0.203)　Signature C (0.265)
Signature B (0.266)　Signature D (0.265)
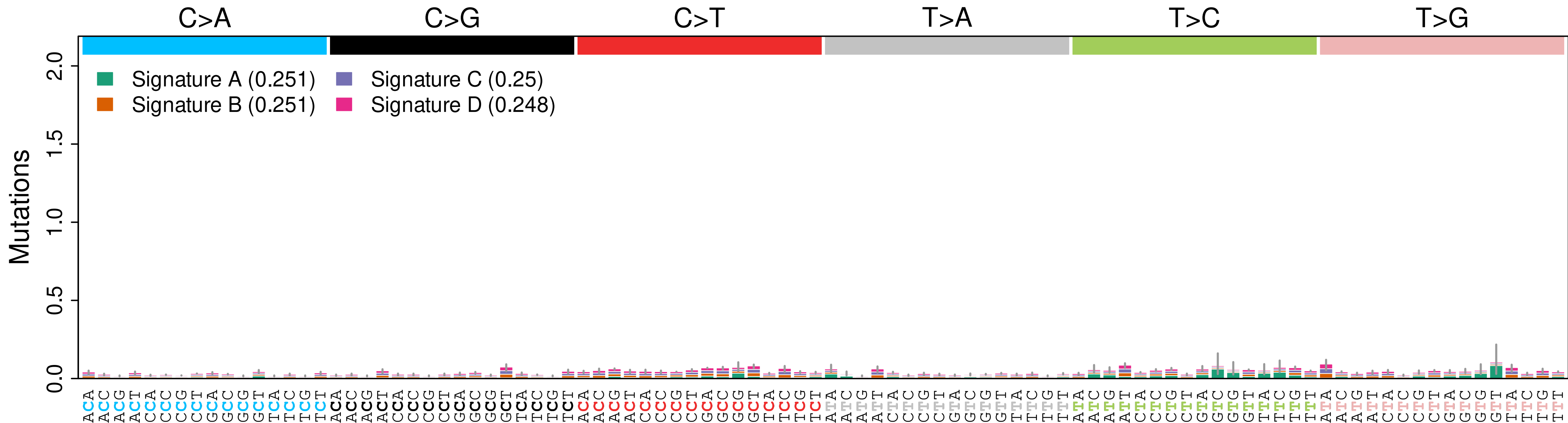
CATD0578a

Reconstructed spectrum (cosine similarity = 0.215)

Signature A (0.286)
Signature B (0.237)
Signature C (0.238)
Signature D (0.239)
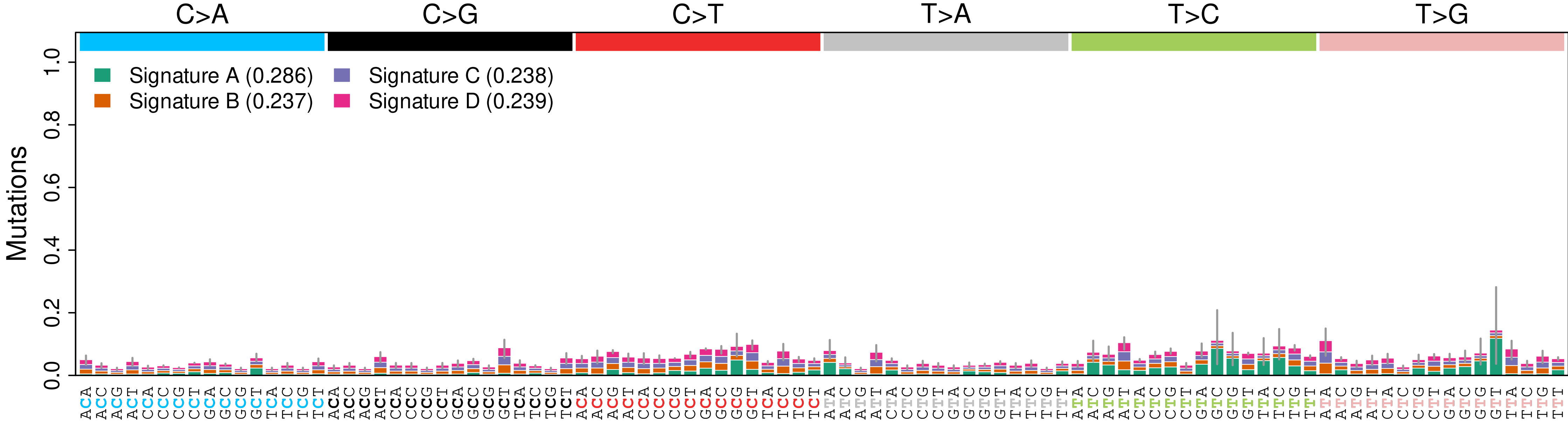
CATD0587a (4 mutations)

Reconstructed spectrum (cosine similarity = 0.164)

Signature A (0.251)   Signature C (0.25)
Signature B (0.251)   Signature D (0.248)

CATD0589a (9 mutations)

Reconstructed spectrum (cosine similarity = 0.357)

Signature A (0.159) Signature C (0.285)
Signature B (0.277) Signature D (0.279)
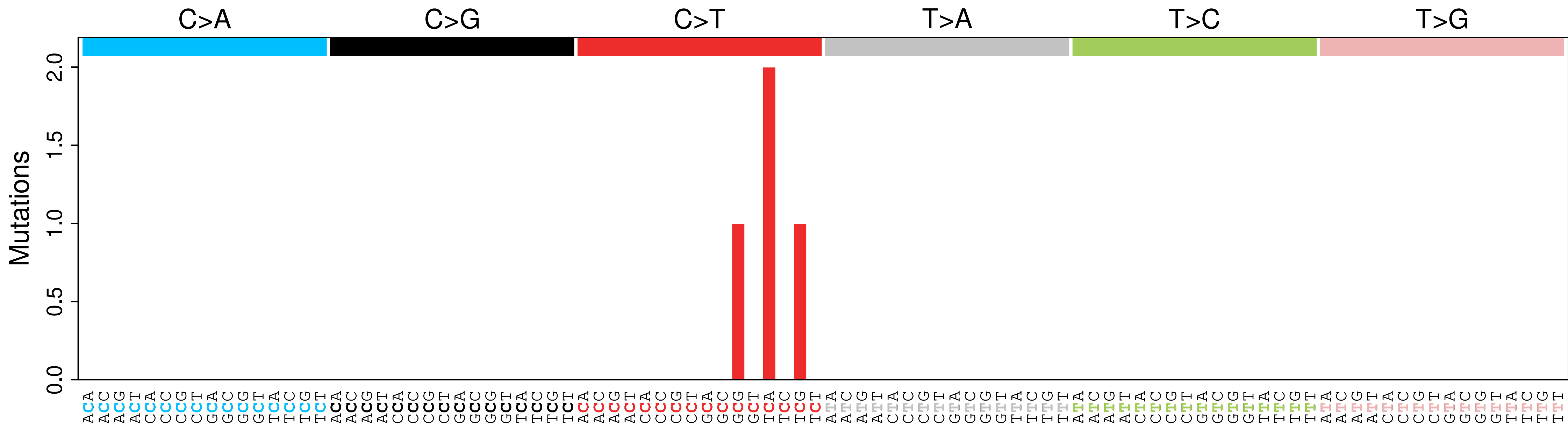
CATD0590a (21 mutations)

Reconstructed spectrum (cosine similarity = 0.519)

Signature A (0.114)   Signature C (0.303)
Signature B (0.291)   Signature D (0.291)
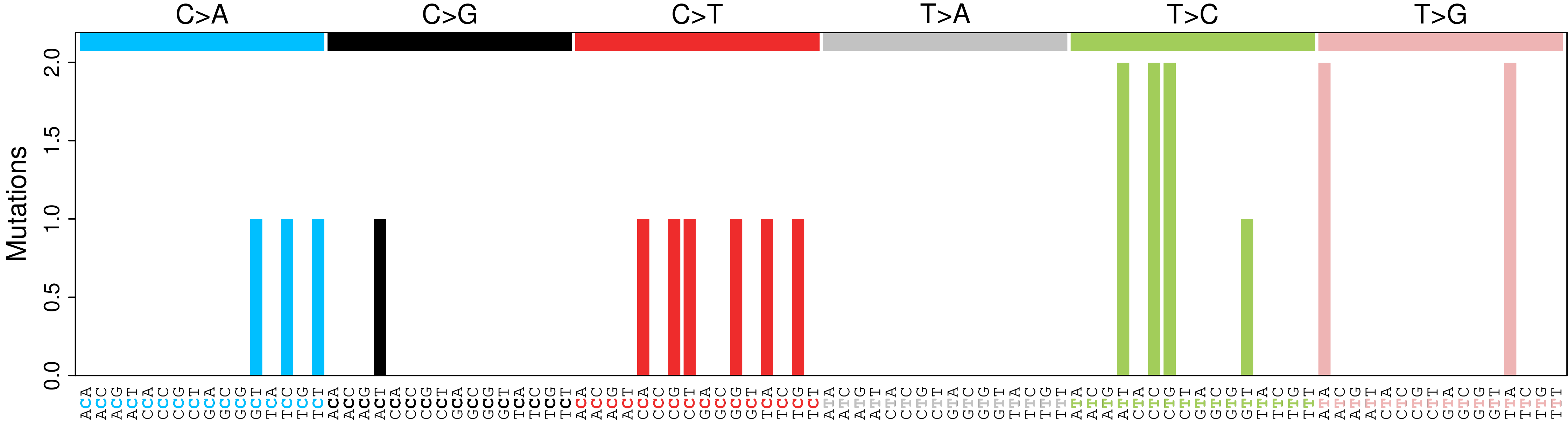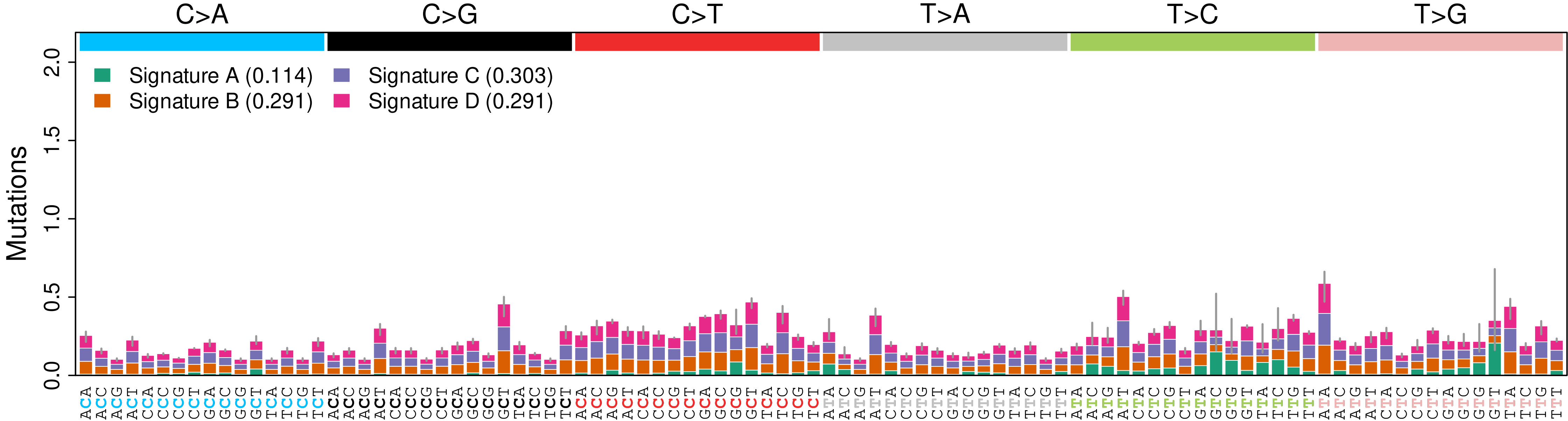
CATD0727a (13 mutations)

Reconstructed spectrum (cosine similarity = 0.35)

Signature A (0.183)
Signature B (0.276)
Signature C (0.27)
Signature D (0.27)

CATD0583a (7 mutations)

Reconstructed spectrum (cosine similarity = 0.258)

Signature A (0.164) Signature C (0.279)
Signature B (0.278) Signature D (0.278)
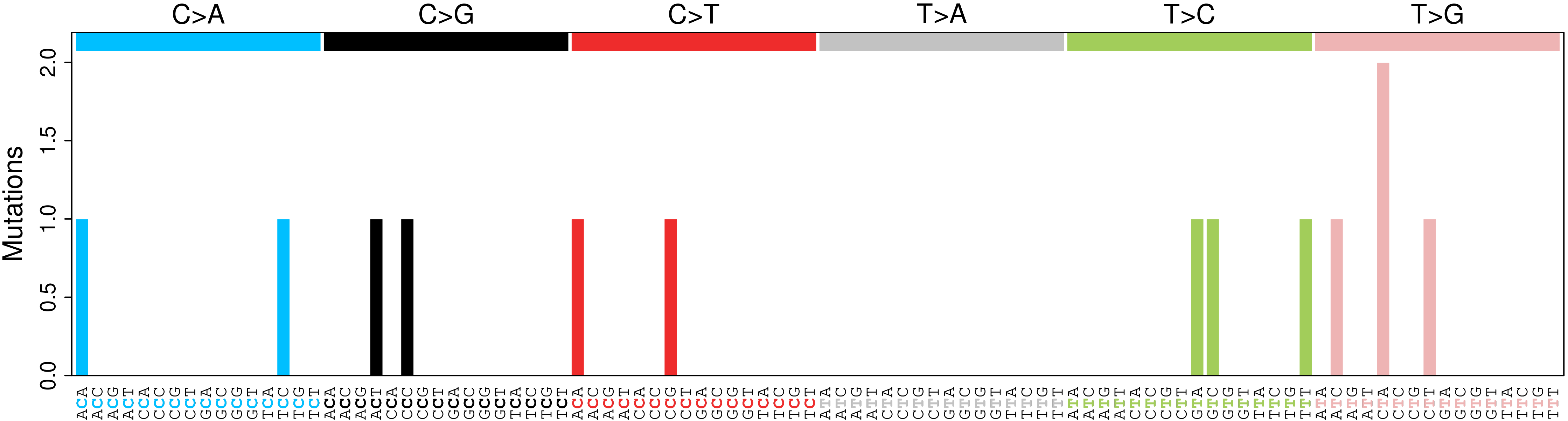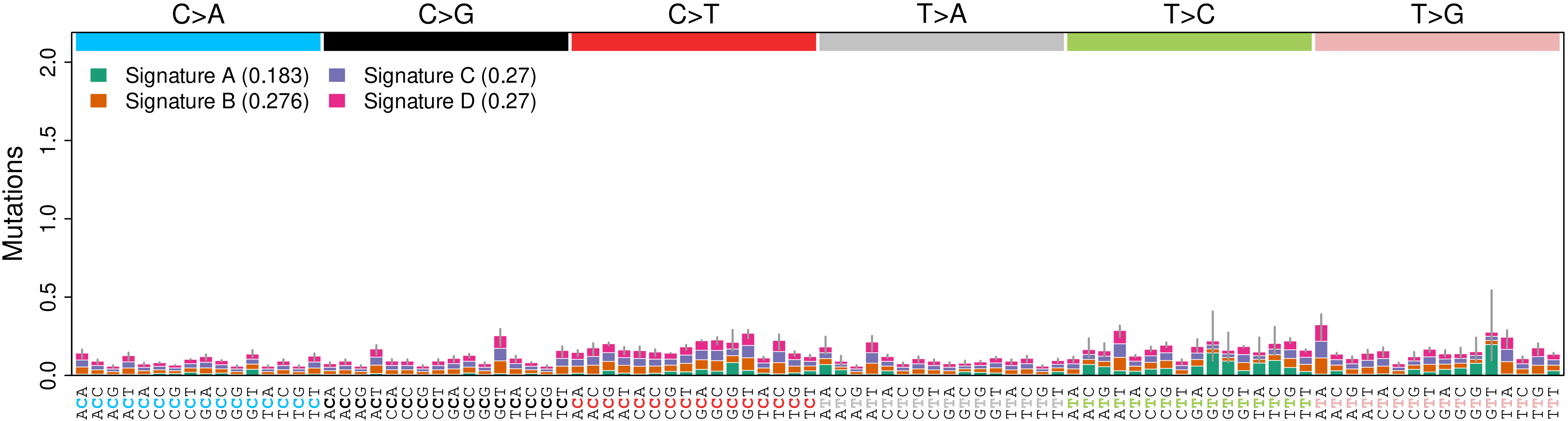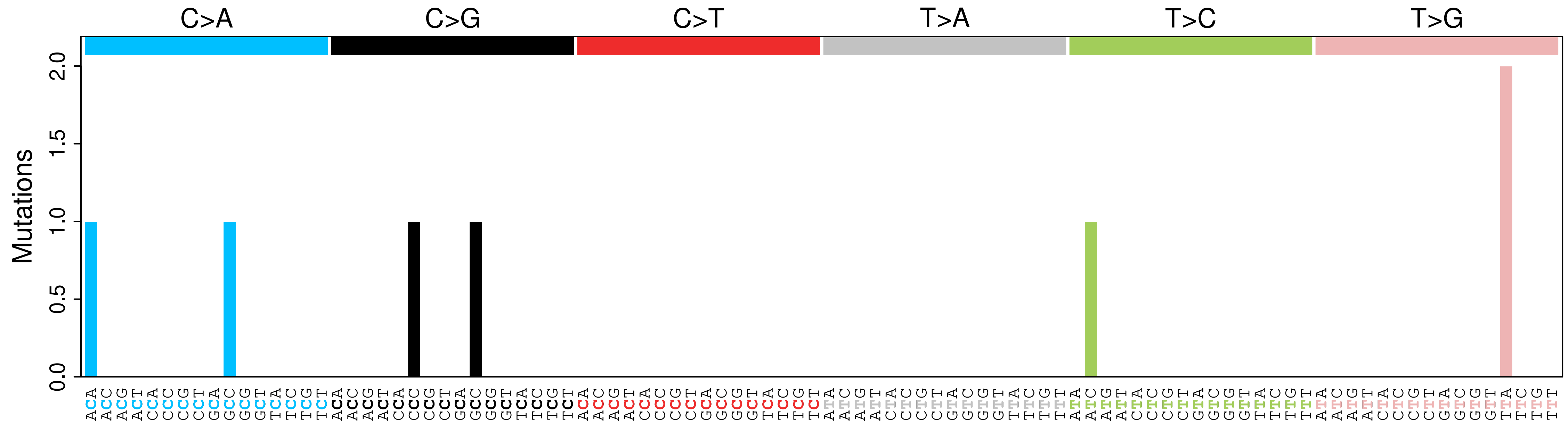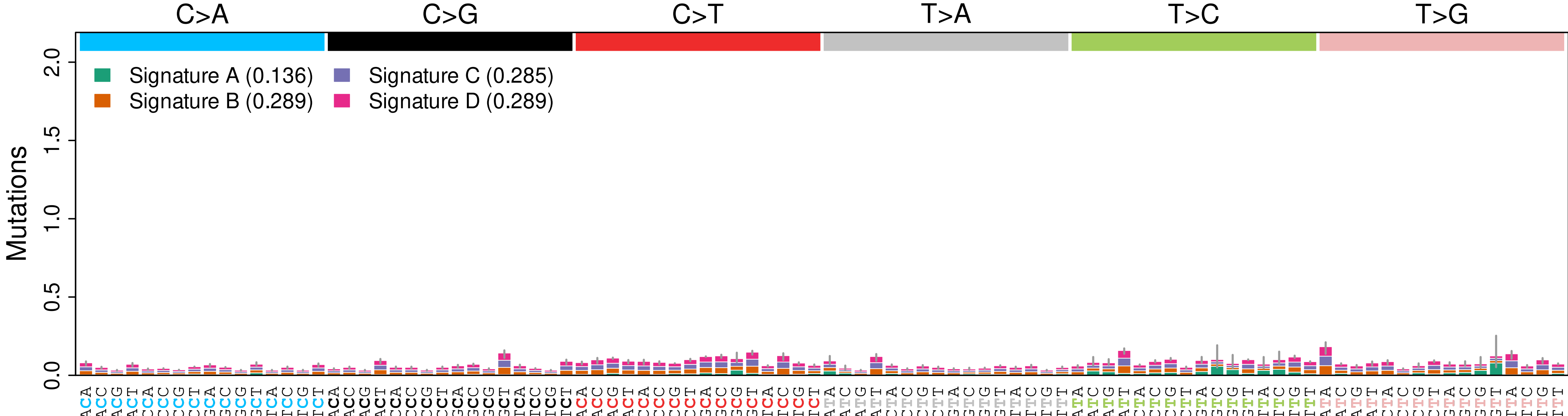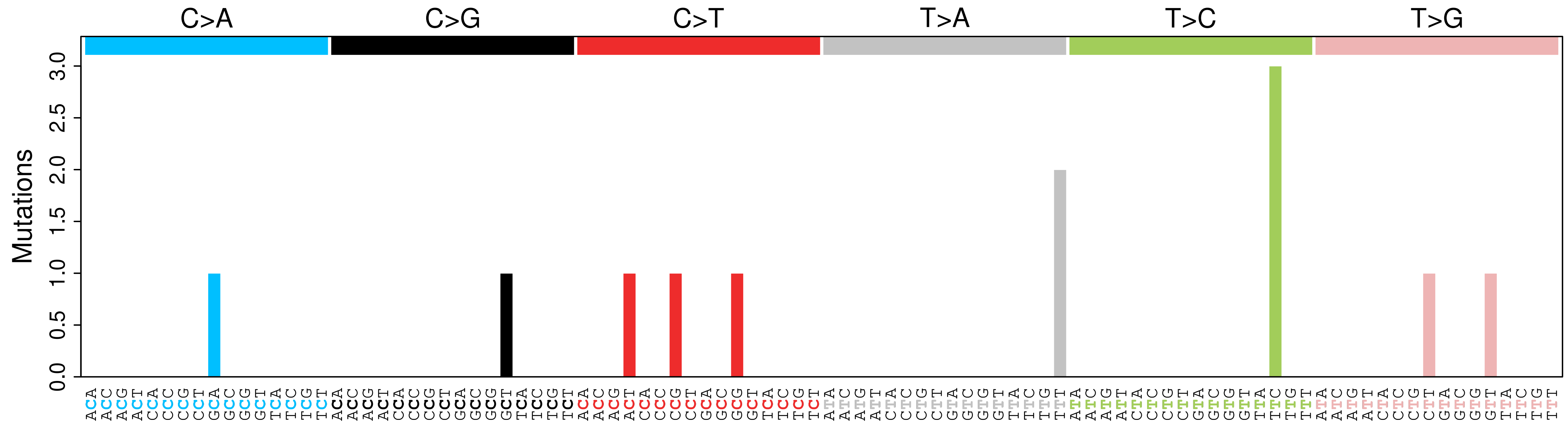
CATD0732a (6 mutations)

Reconstructed spectrum (cosine similarity = 0.251)

Signature A (0.136)   Signature C (0.285)
Signature B (0.289)   Signature D (0.289)
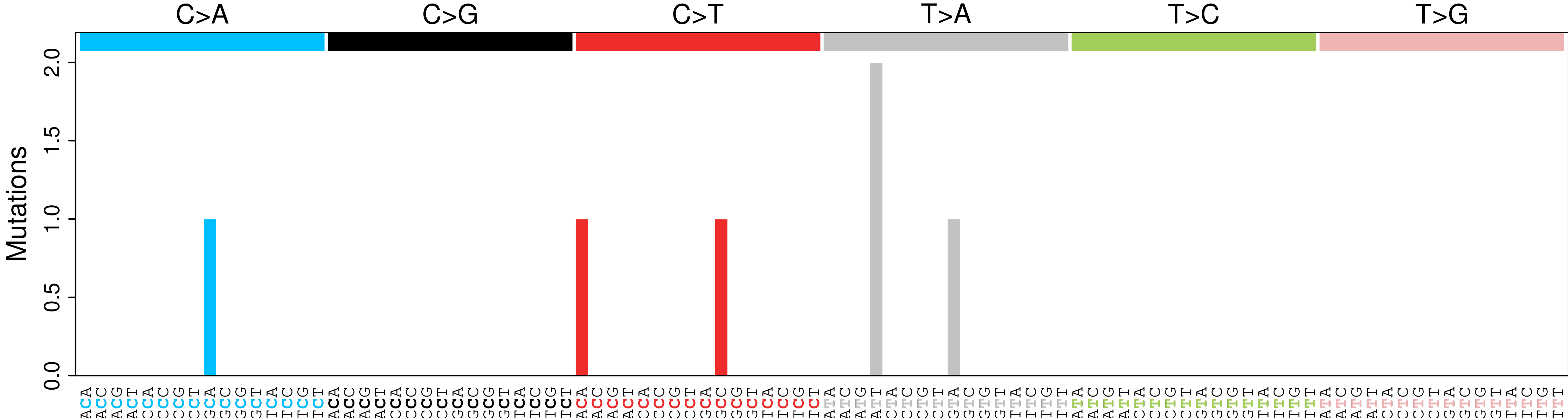
CATD0725a (12 mutations)

Reconstructed spectrum (cosine similarity = 0.392)

Signature A (0.475)   Signature C (0.174)
Signature B (0.176)   Signature D (0.175)
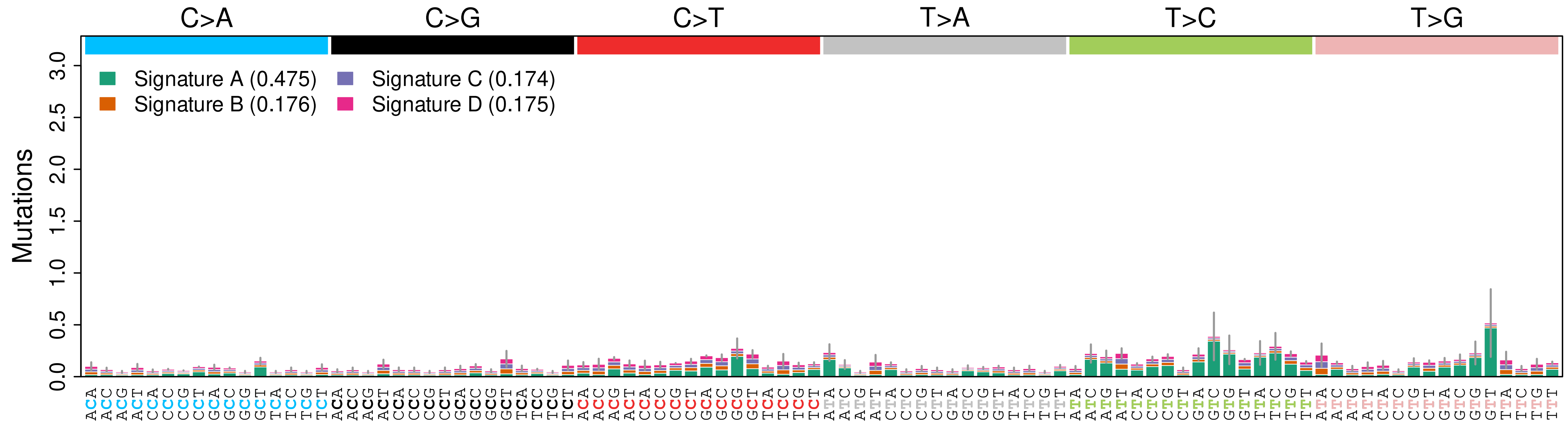
CATD0577a (20 mutations)

Reconstructed spectrum (cosine similarity = 0.387)

Signature A (0.111) Signature C (0.29)
Signature B (0.3) Signature D (0.3)
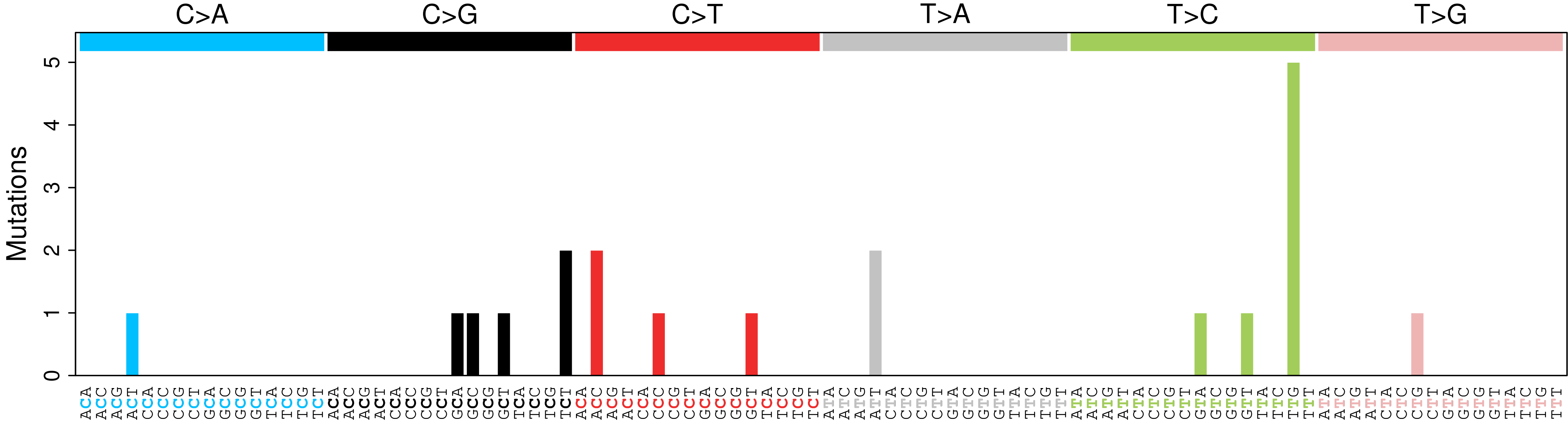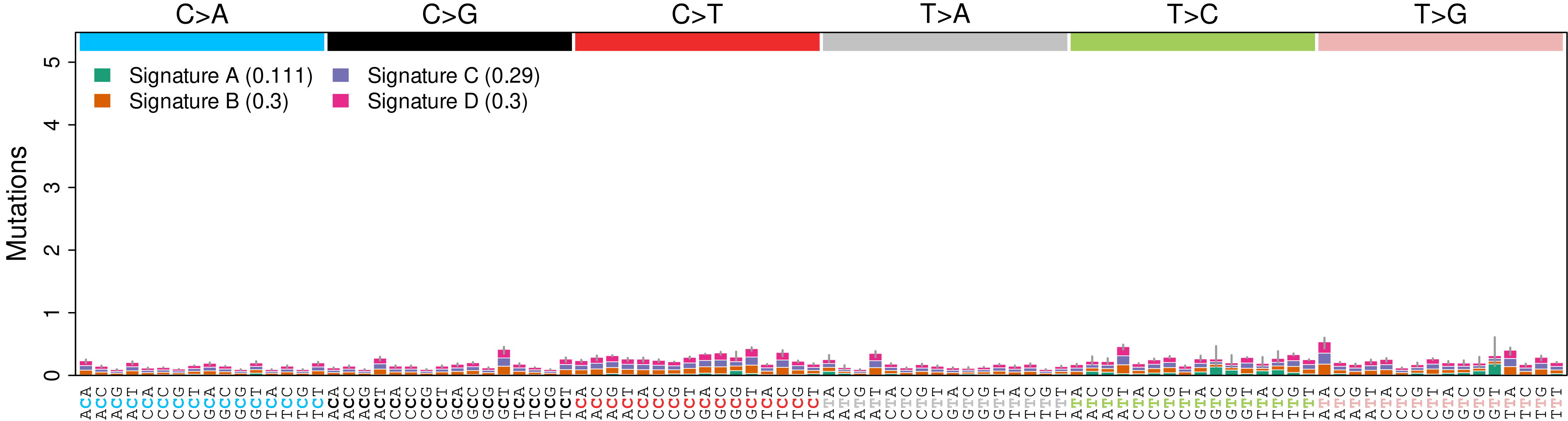
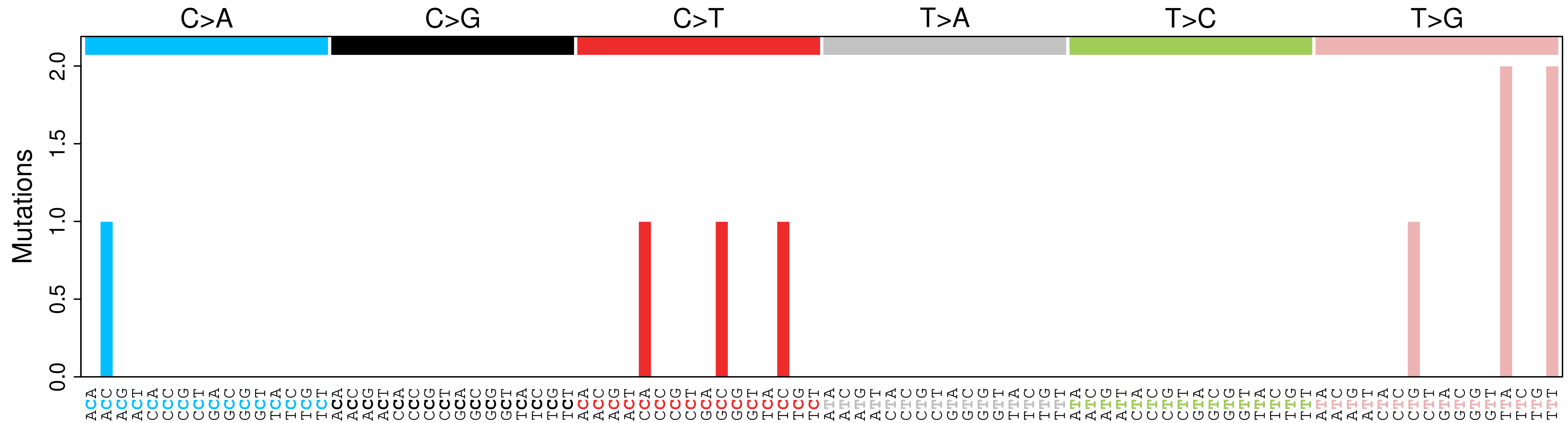**CATD0606a (9 mutations)**

Reconstructed spectrum (cosine similarity = 0.266)

Signature A (0.157) Signature C (0.281)
Signature B (0.283) Signature D (0.278)

CATD0588a (9 mutations)

Reconstructed spectrum (cosine similarity = 0.308)

Signature A (0.149)   Signature C (0.281)
Signature B (0.283)   Signature D (0.287)

CATD0572a (6 mutations)

Reconstructed spectrum (cosine similarity = 0.233)

Signature A (0.142) Signature C (0.286)
Signature B (0.285) Signature D (0.288)
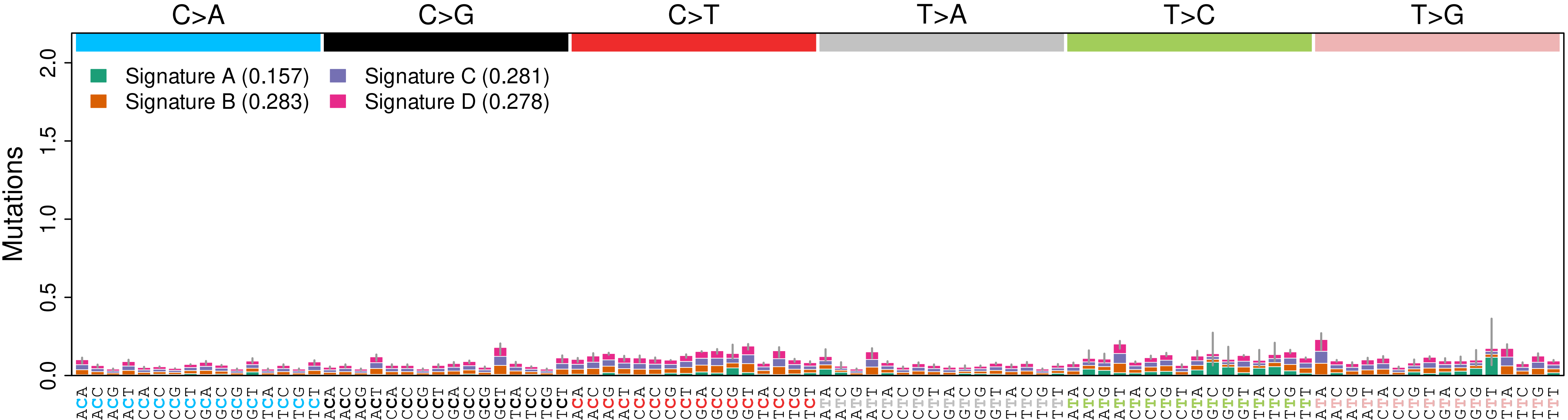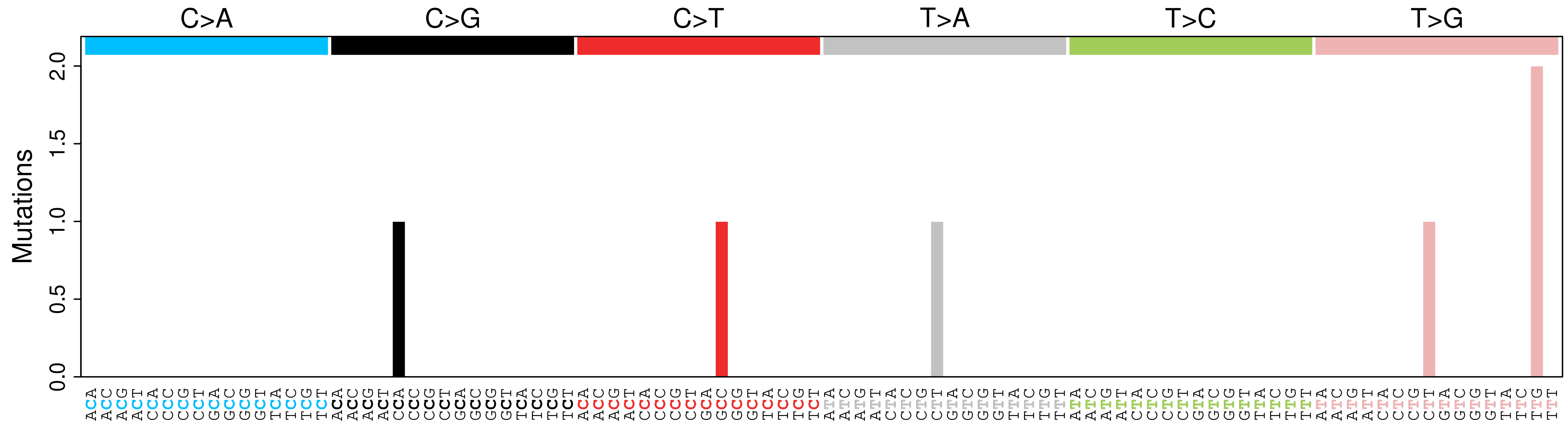
CATD0573a (12 mutations)

Reconstructed spectrum (cosine similarity = 0.413)

Signature A (0.164) Signature C (0.279)
Signature B (0.272) Signature D (0.284)
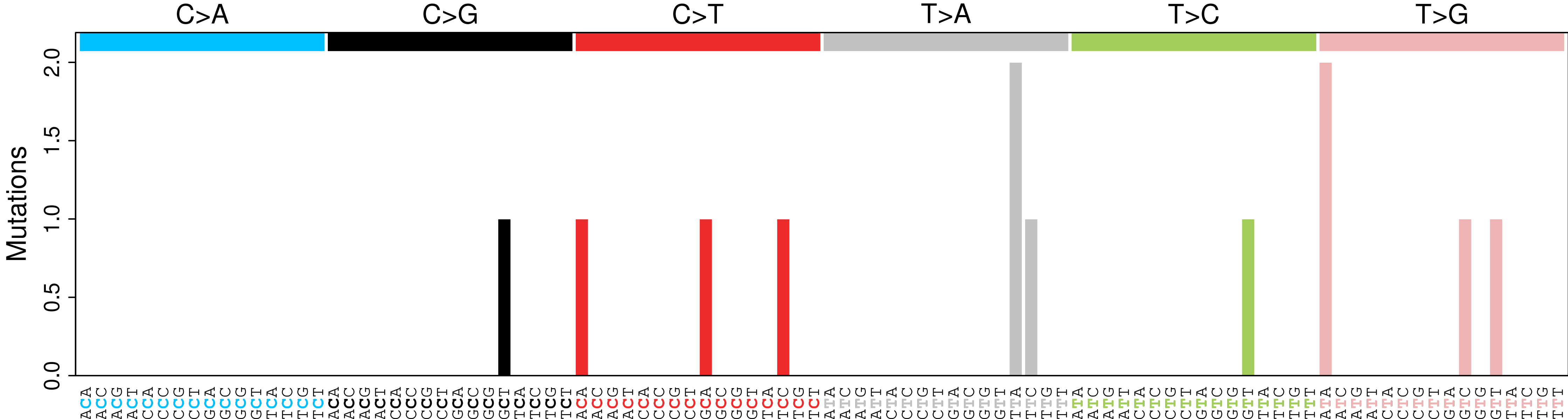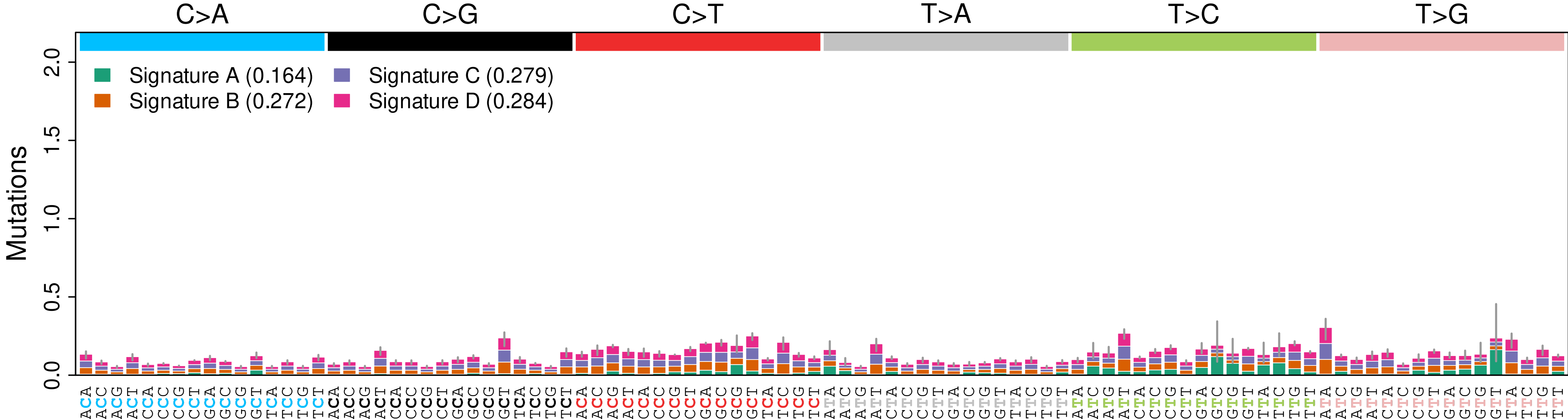
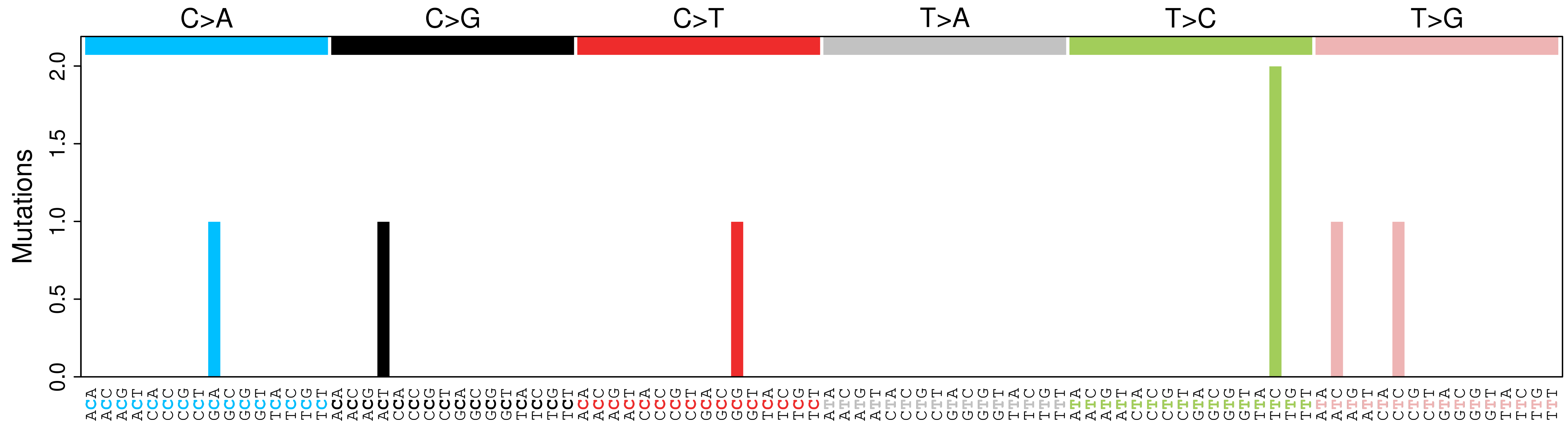**CATD0592a (6 mutations)**

Reconstructed spectrum (cosine similarity = 0.164)

Signature A (0.142)   Signature C (0.281)
Signature B (0.29)   Signature D (0.286)
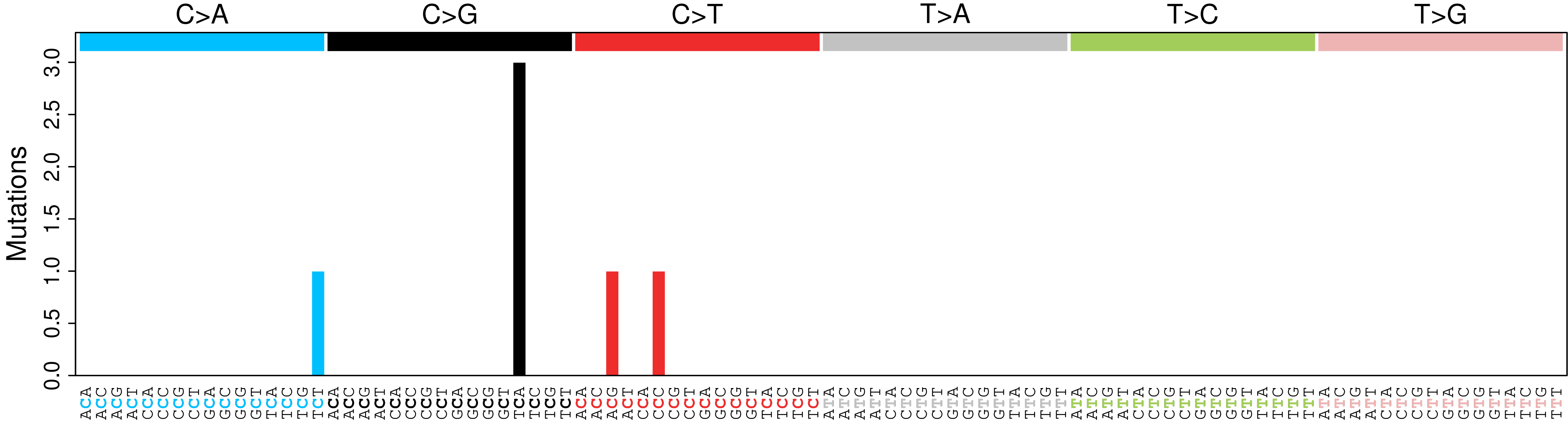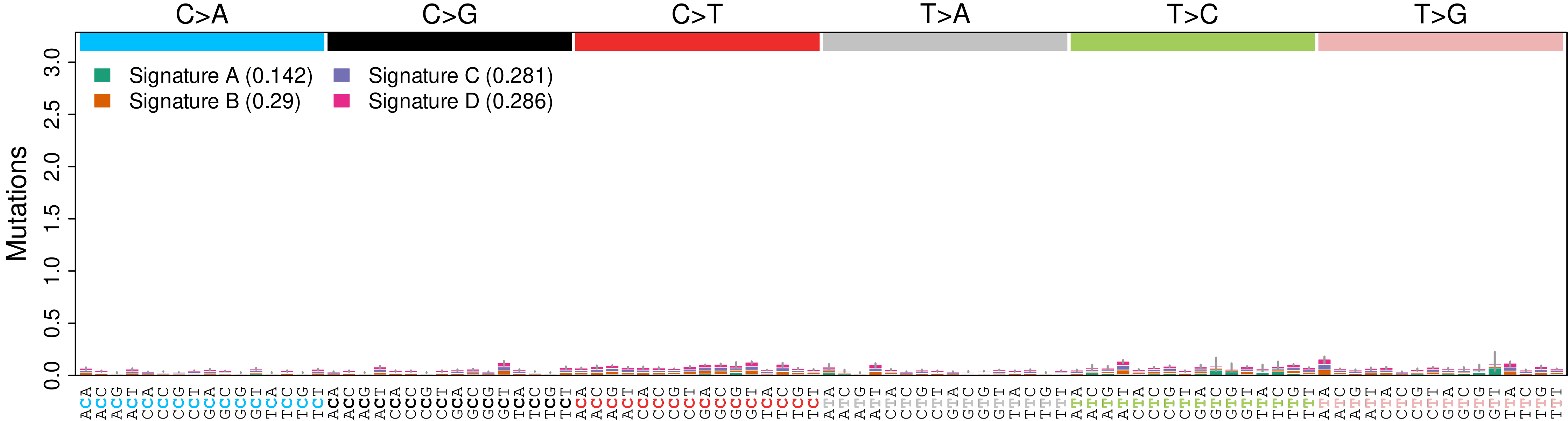
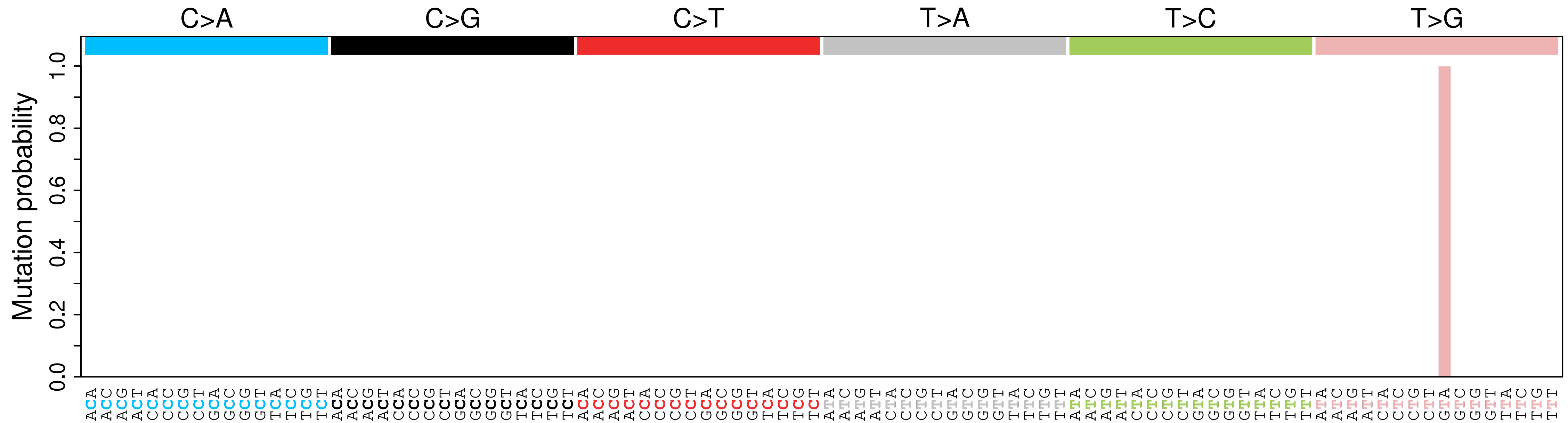**CATD0603a (7 mutations)**

Reconstructed spectrum (cosine similarity = 0.28)
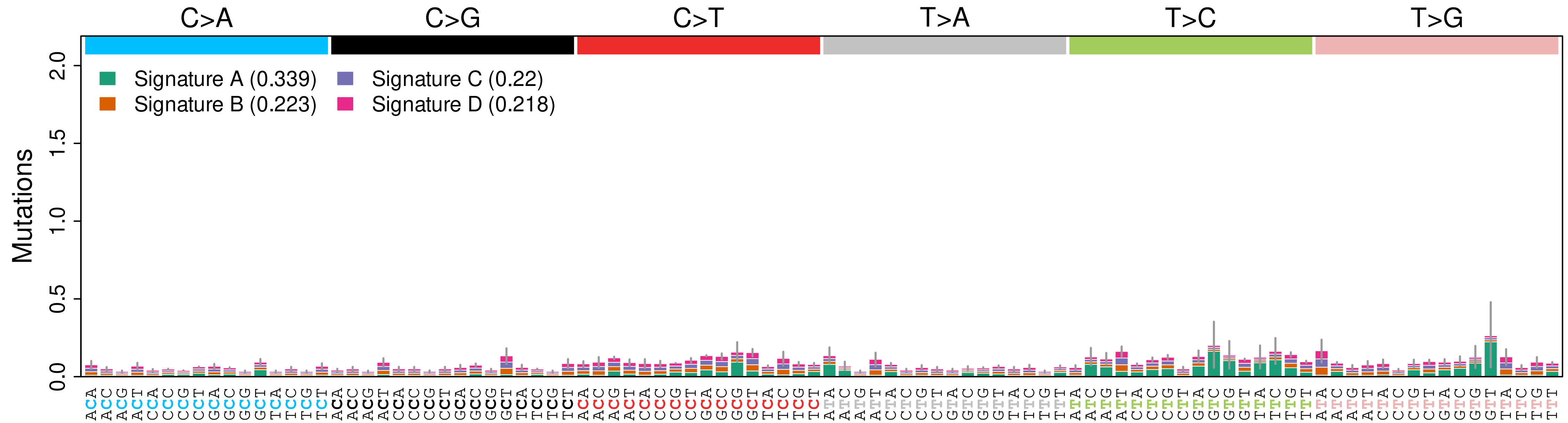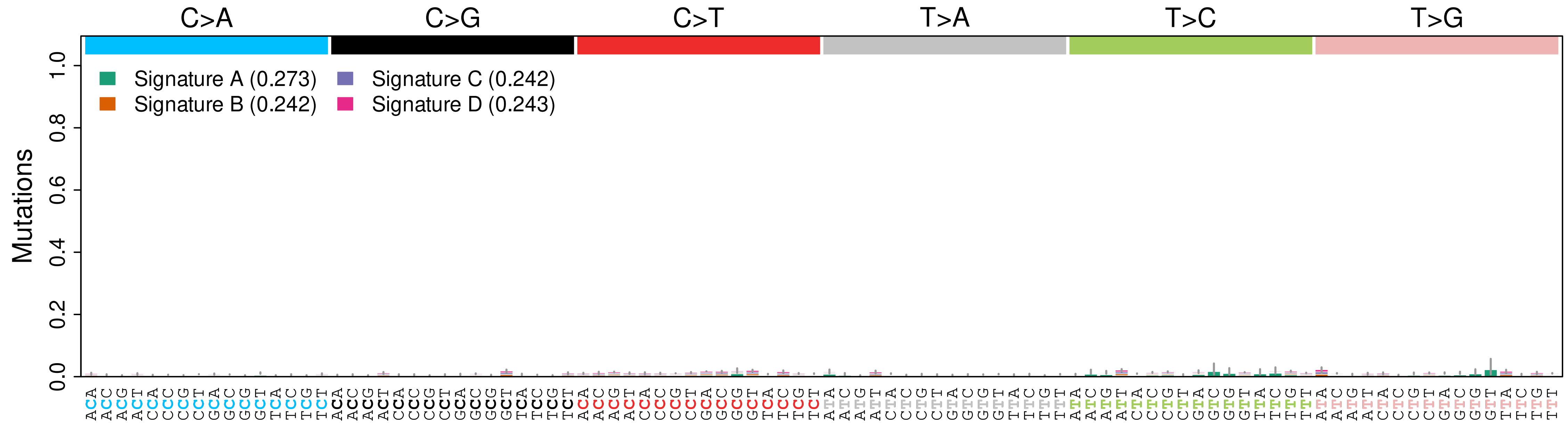
Signature A (0.339) Signature C (0.22)
Signature B (0.223) Signature D (0.218)

CATD0722a

CATD0582a

CATD0585a (3 mutations)

Reconstructed spectrum (cosine similarity = 0.185)

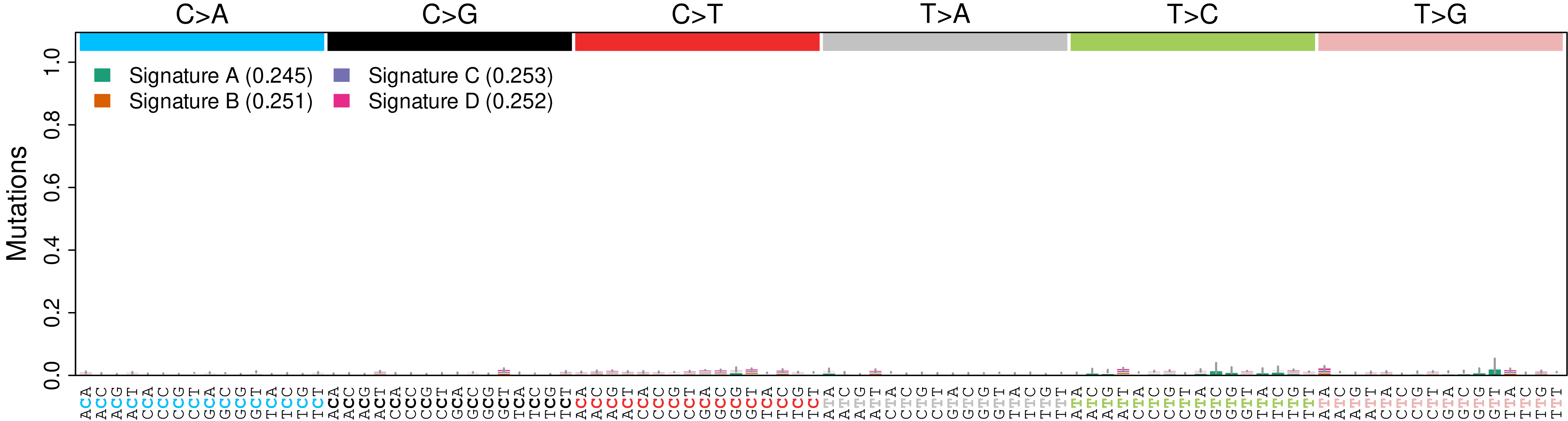Signature A (0.162) Signature C (0.278)
Signature B (0.279) Signature D (0.281)
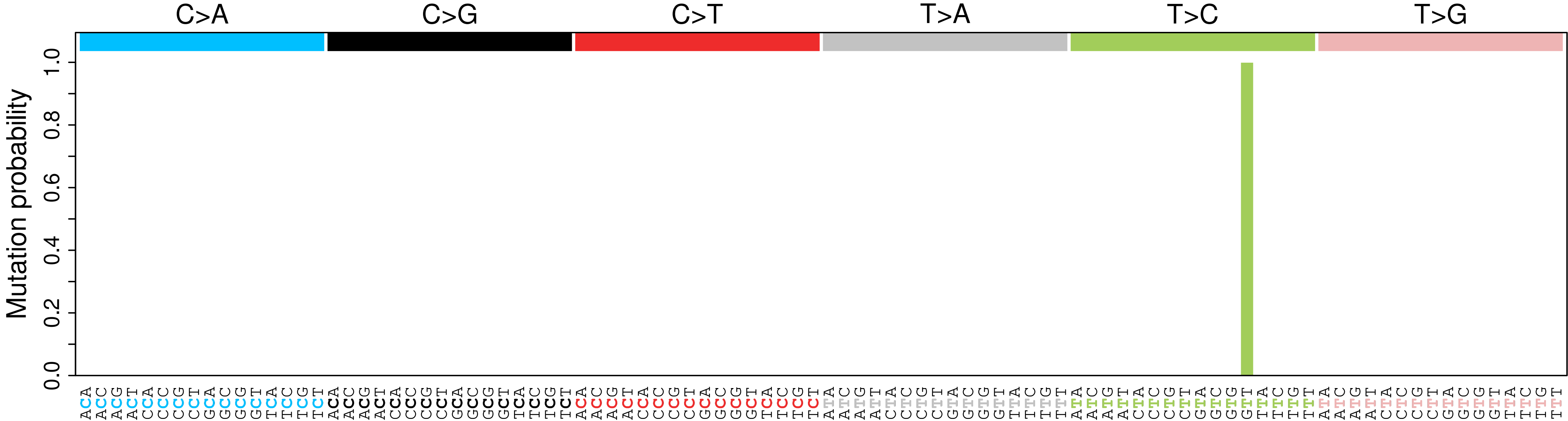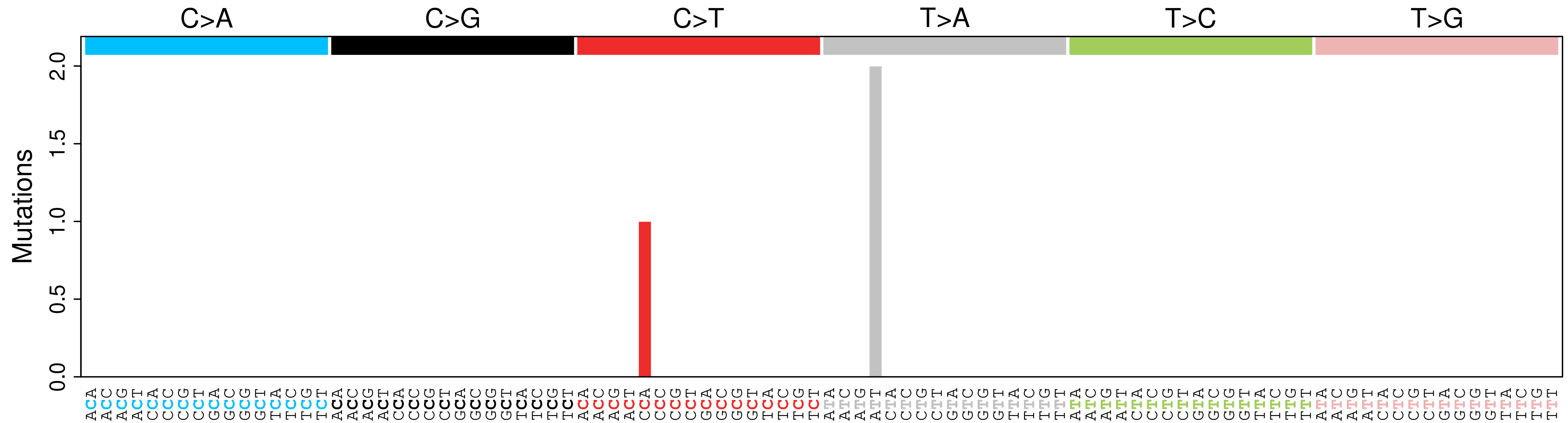
CATD0593a

Reconstructed spectrum (cosine similarity = 0.193)

Signature A (0.23) Signature C (0.257)
Signature B (0.256) Signature D (0.257)
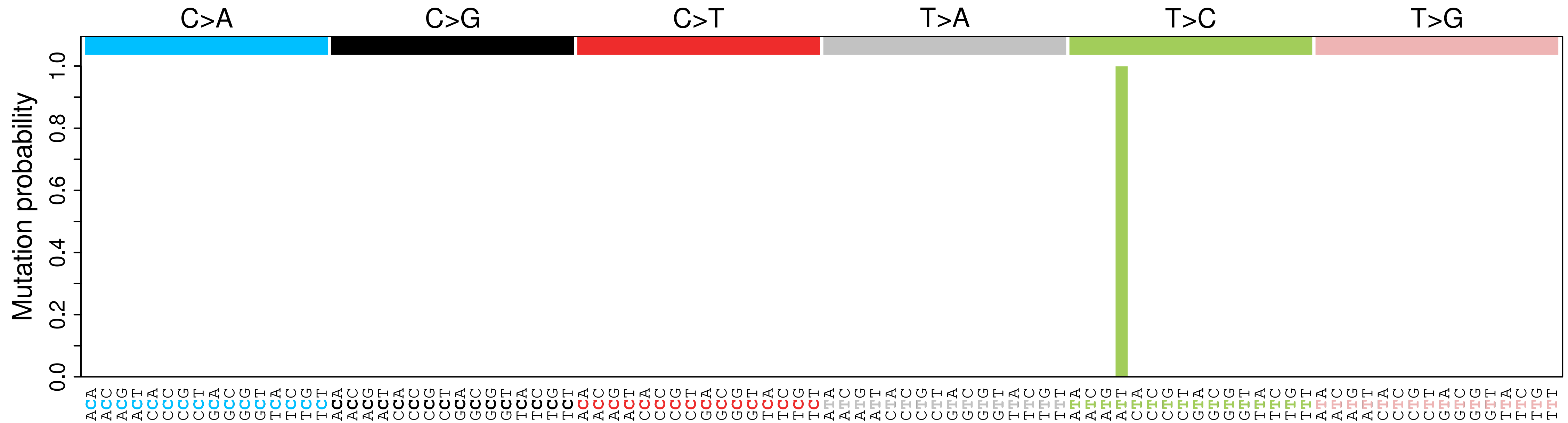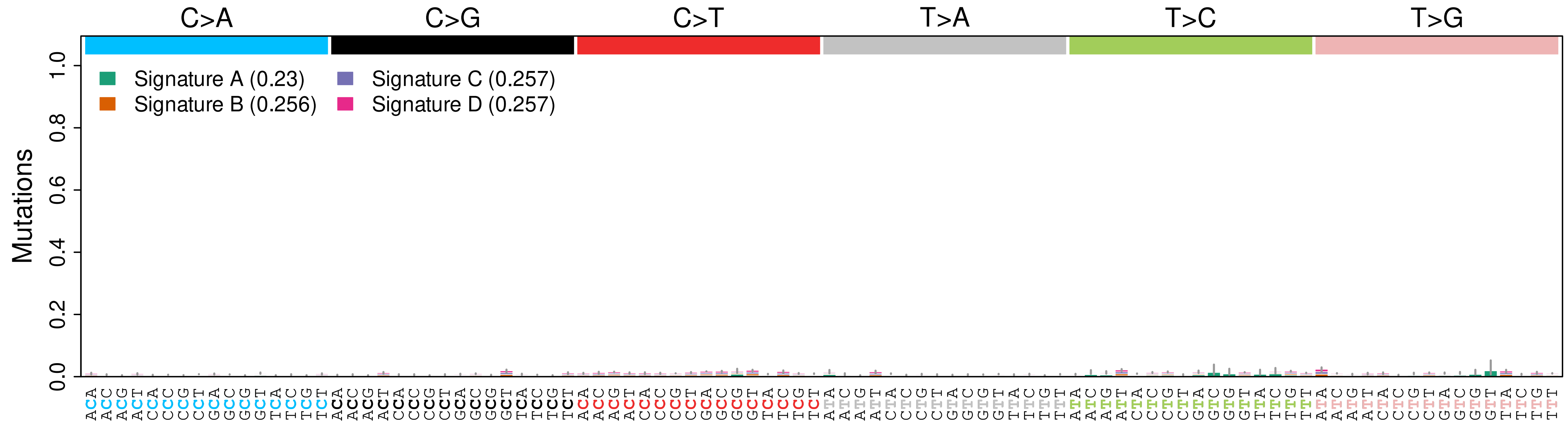
CATD0581a (3 mutations)

Reconstructed spectrum (cosine similarity = 0.145)

Signature A (0.166)   Signature C (0.278)
Signature B (0.279)   Signature D (0.278)

CATD0736a (4 mutations)

Reconstructed spectrum (cosine similarity = 0.277)

Signature A (0.285)   Signature C (0.242)
Signature B (0.235)   Signature D (0.238)
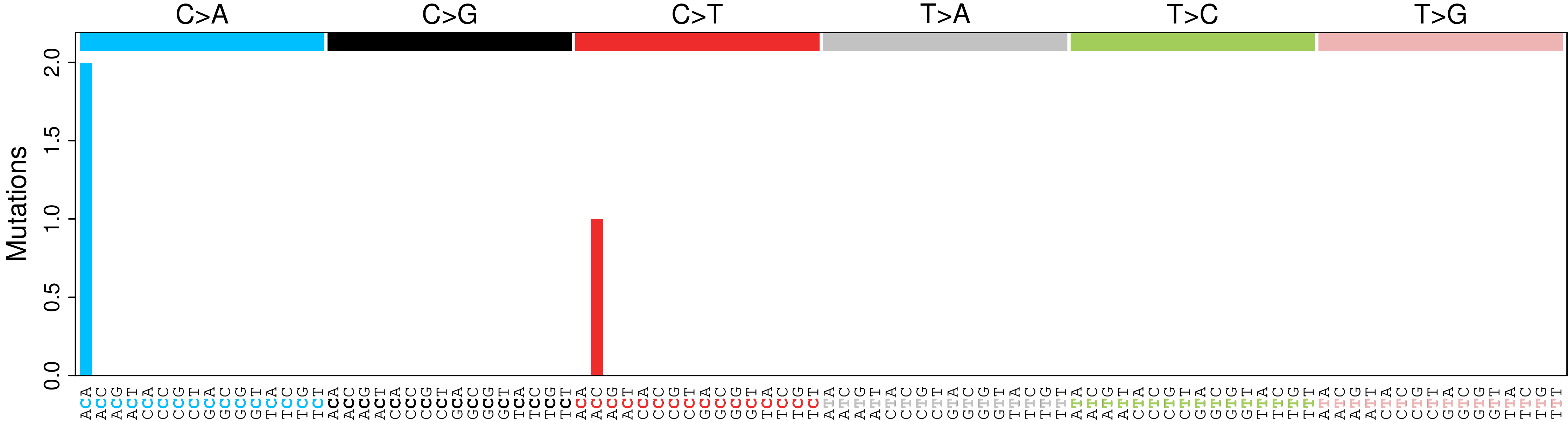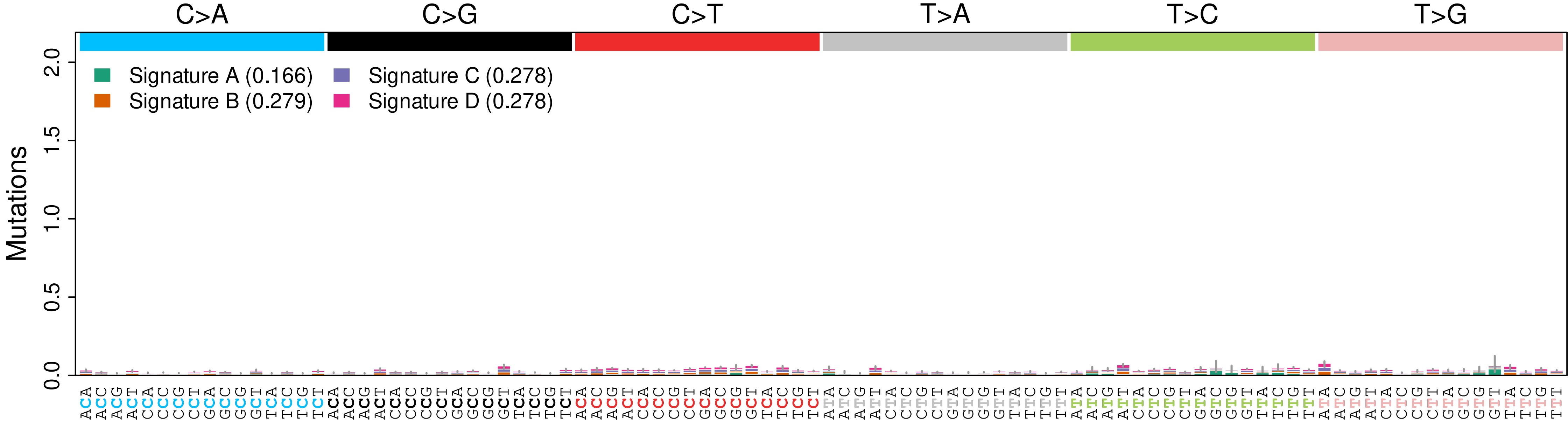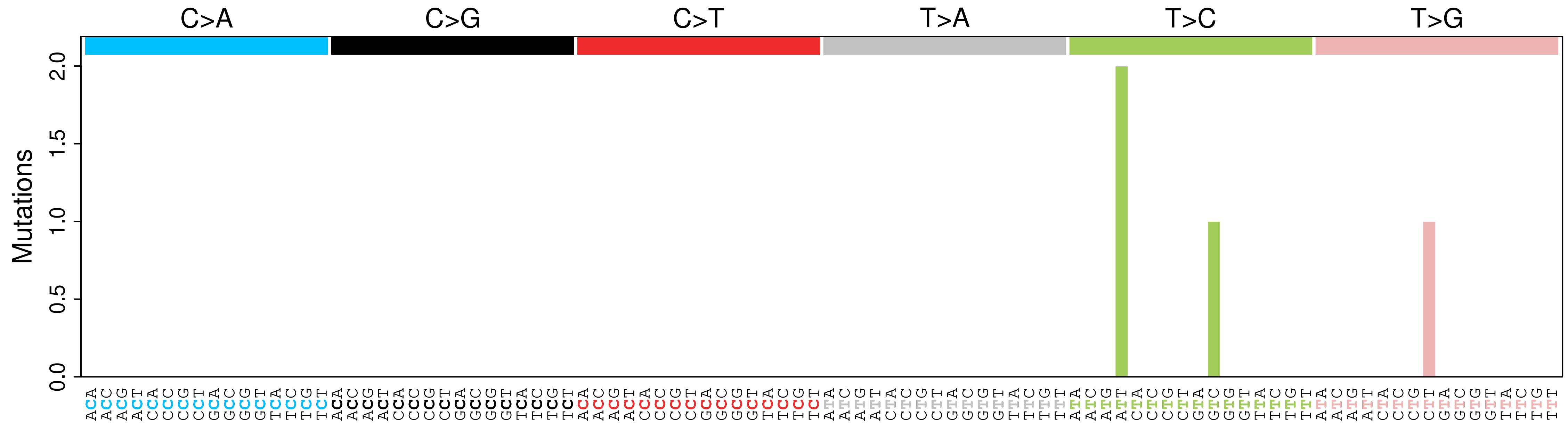
CATD0596a

Reconstructed spectrum (cosine similarity = 0.167)

Signature A (0.218)   Signature C (0.259)
Signature B (0.262)   Signature D (0.261)
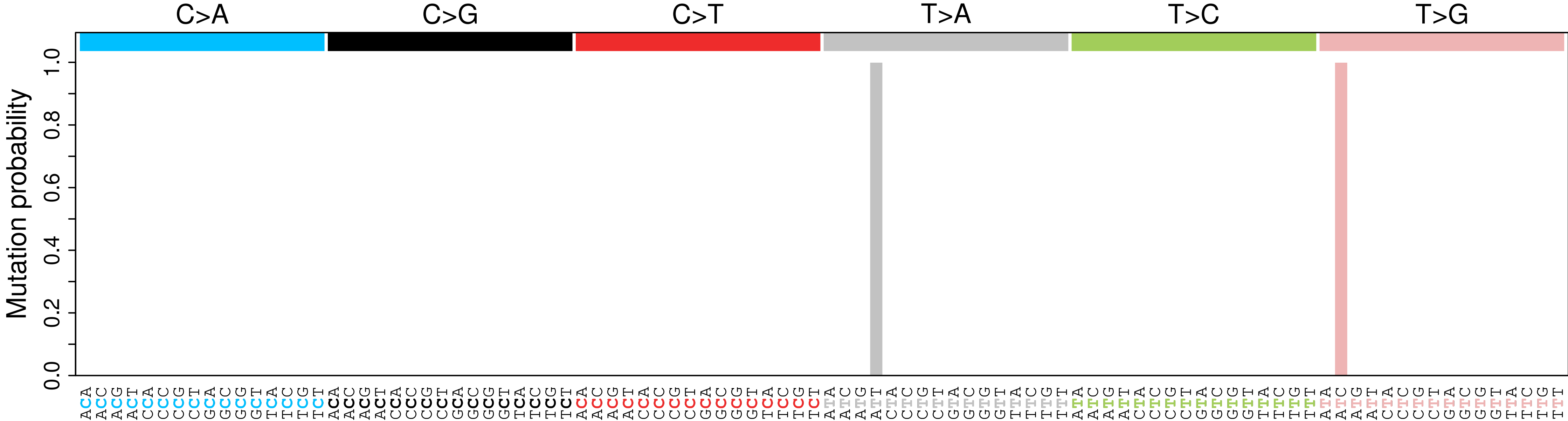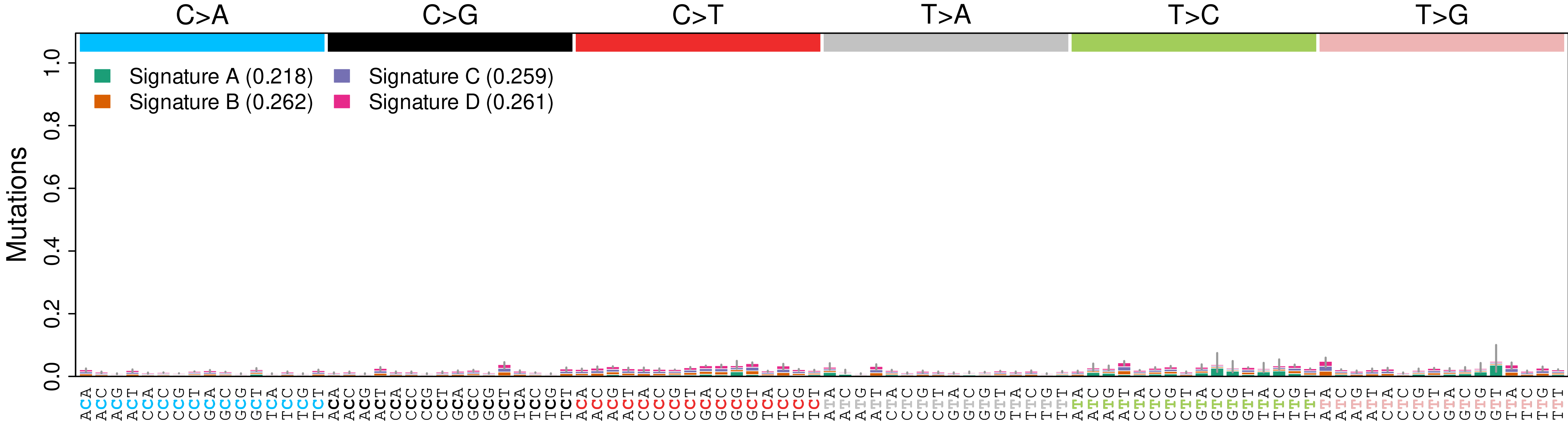
CATD0719a

Reconstructed spectrum (cosine similarity = 0.146)

Signature A (0.206)   Signature C (0.265)
Signature B (0.264)   Signature D (0.265)

CATD0721a

Reconstructed spectrum (cosine similarity = 0.123)

Signature A (0.236) Signature C (0.254)
Signature B (0.254) Signature D (0.256)

CATD0604a

Reconstructed spectrum (cosine similarity = 0.123)

- Signature A (0.235)
- Signature B (0.254)
- Signature C (0.255)
- Signature D (0.255)
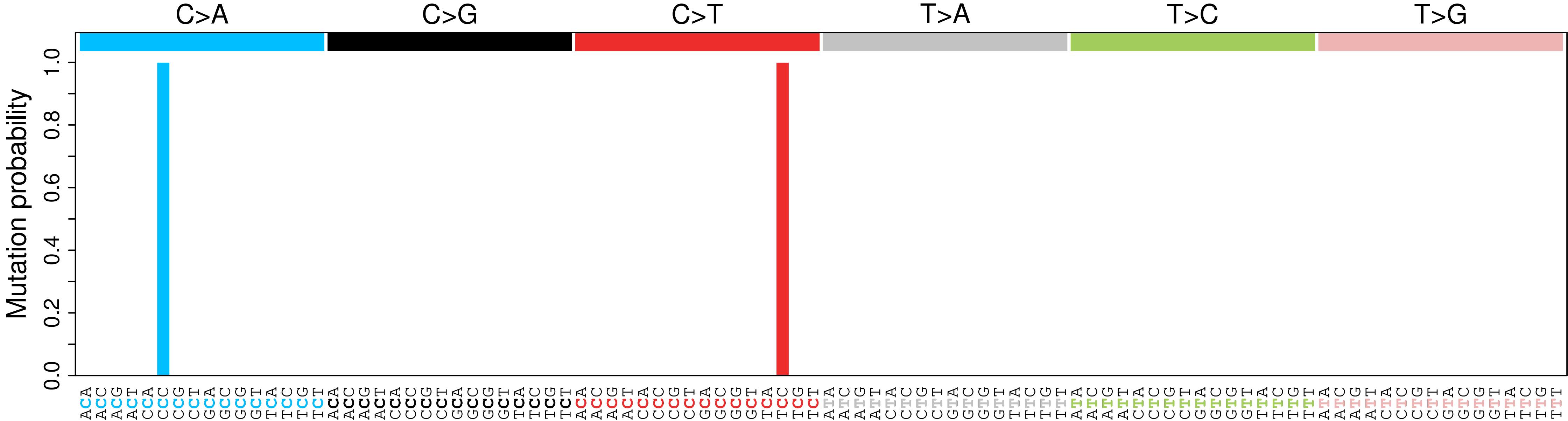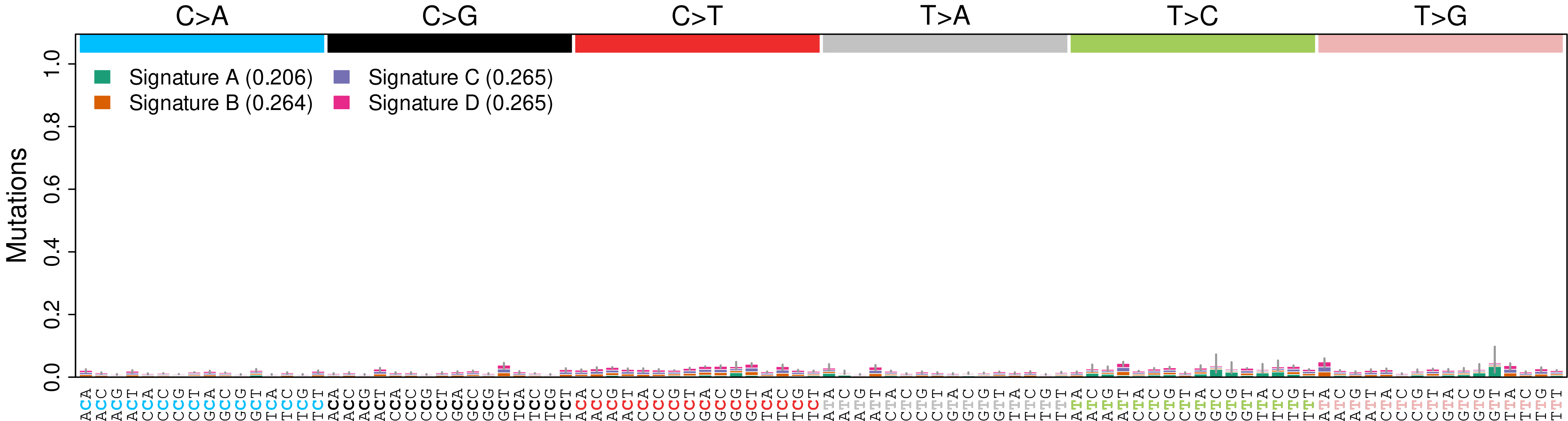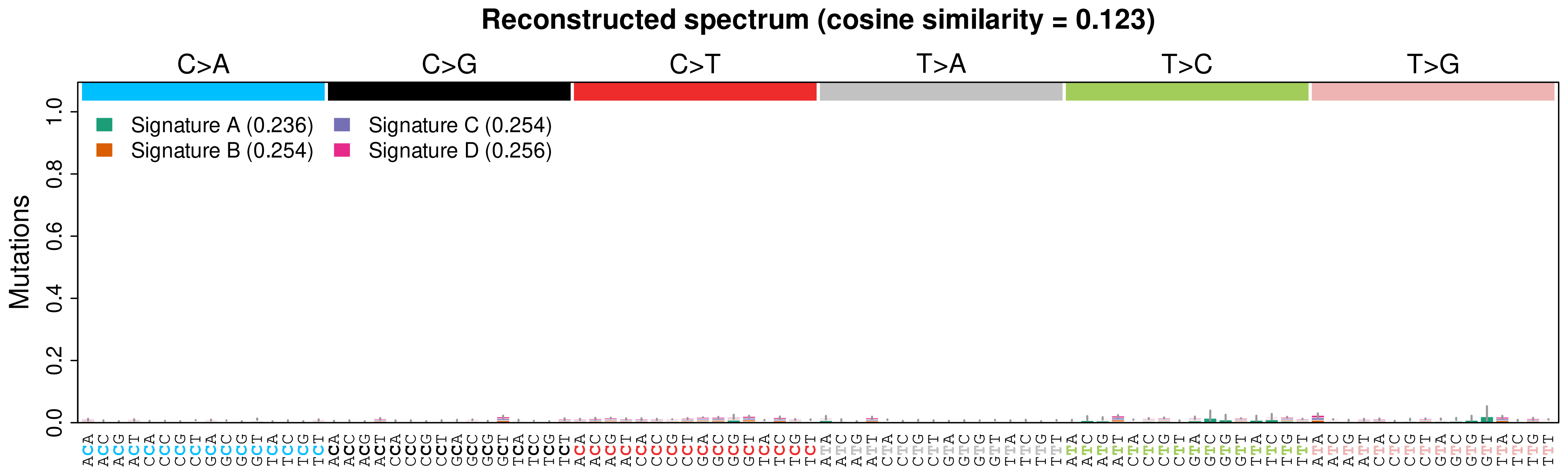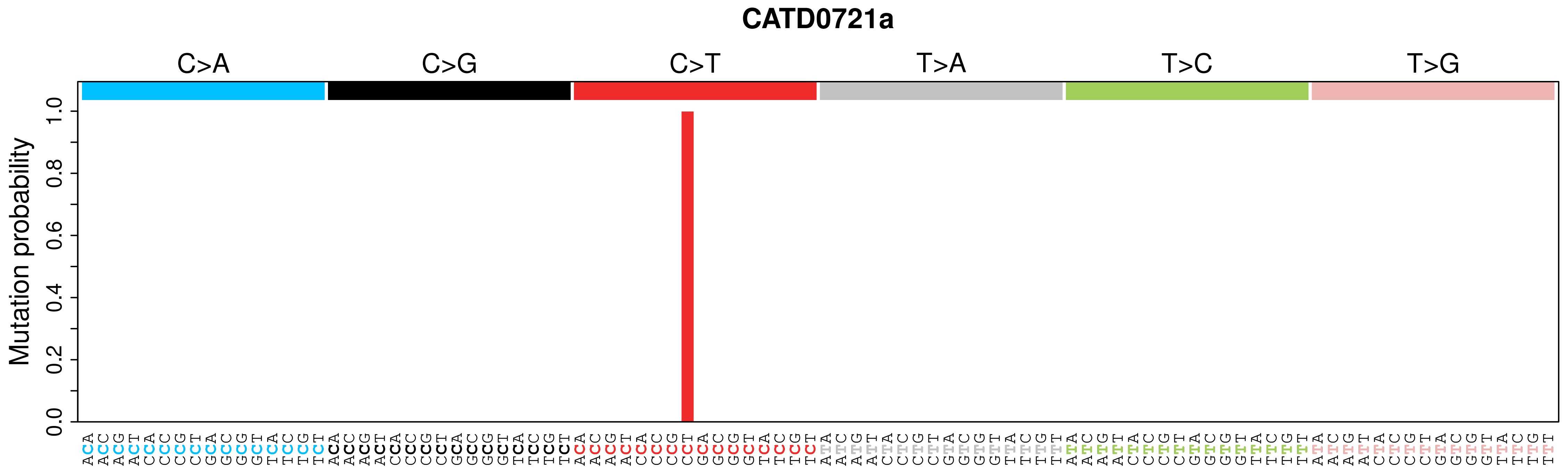
CATD0720a

Reconstructed spectrum (cosine similarity = 0.195)

Signature A (0.153)   Signature C (0.281)
Signature B (0.281)   Signature D (0.286)

CATD0682a

Reconstructed spectrum (cosine similarity = 0.06)

Signature A (0.26)   Signature C (0.246)
Signature B (0.247) Signature D (0.247)