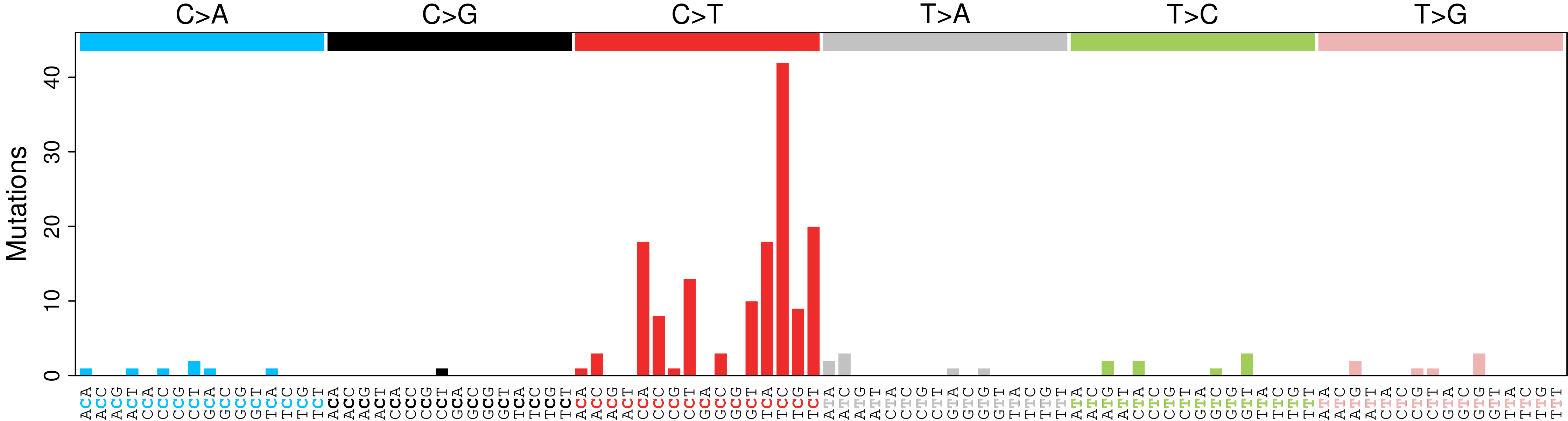
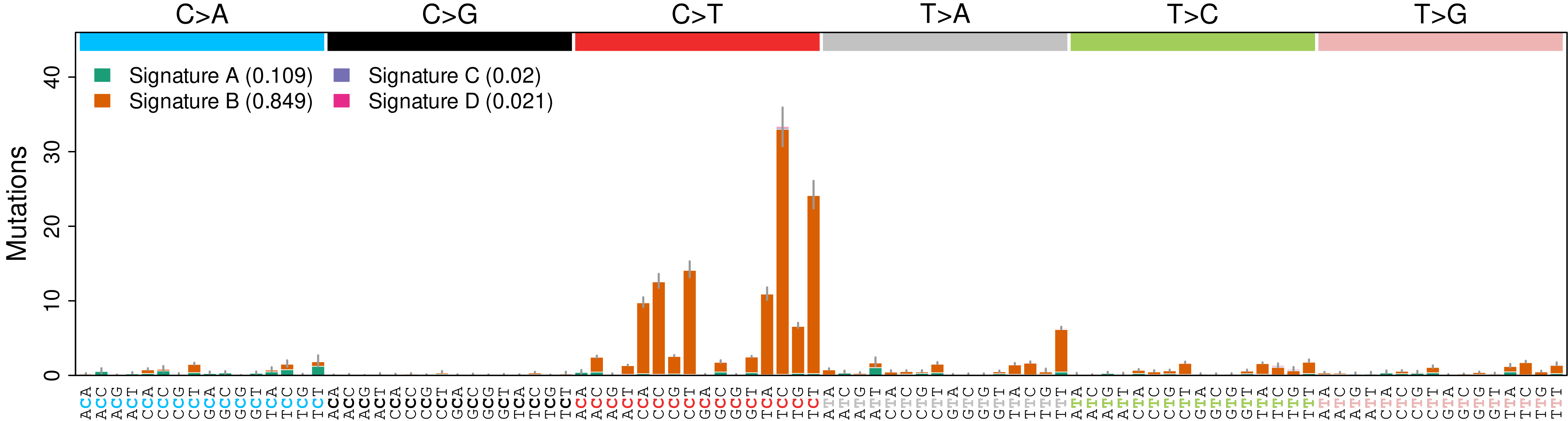


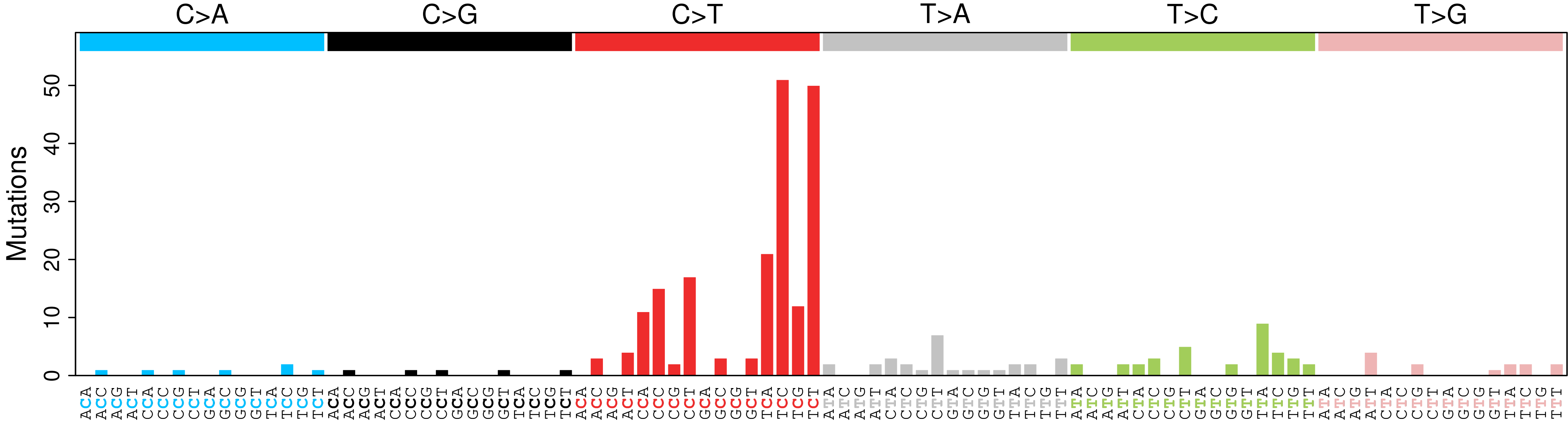
CATD269a (176 mutations)



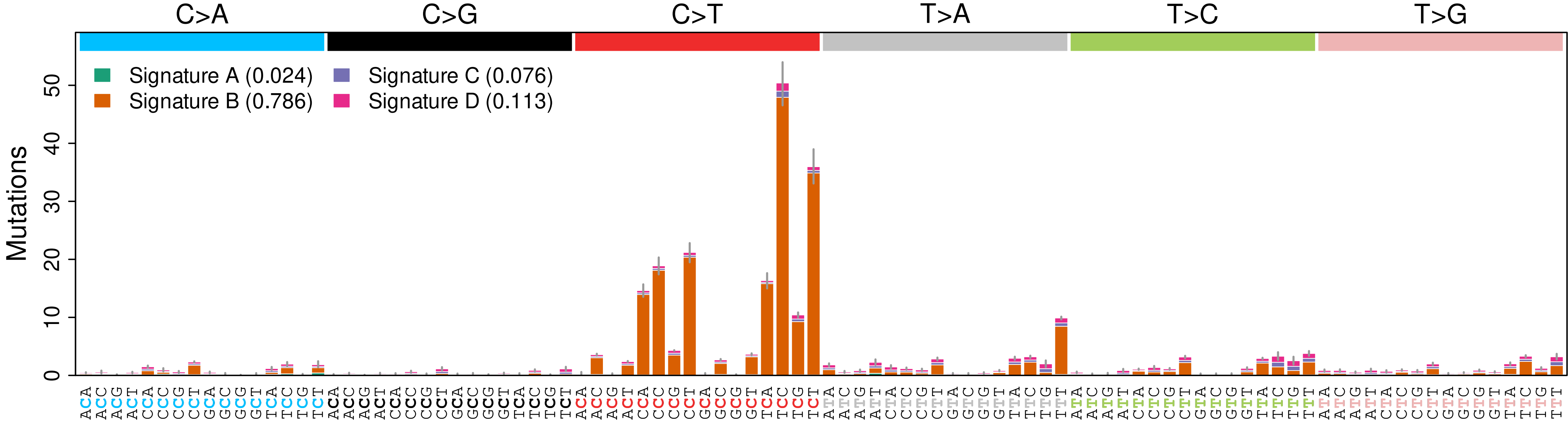
Reconstructed spectrum (cosine similarity = 0.938)



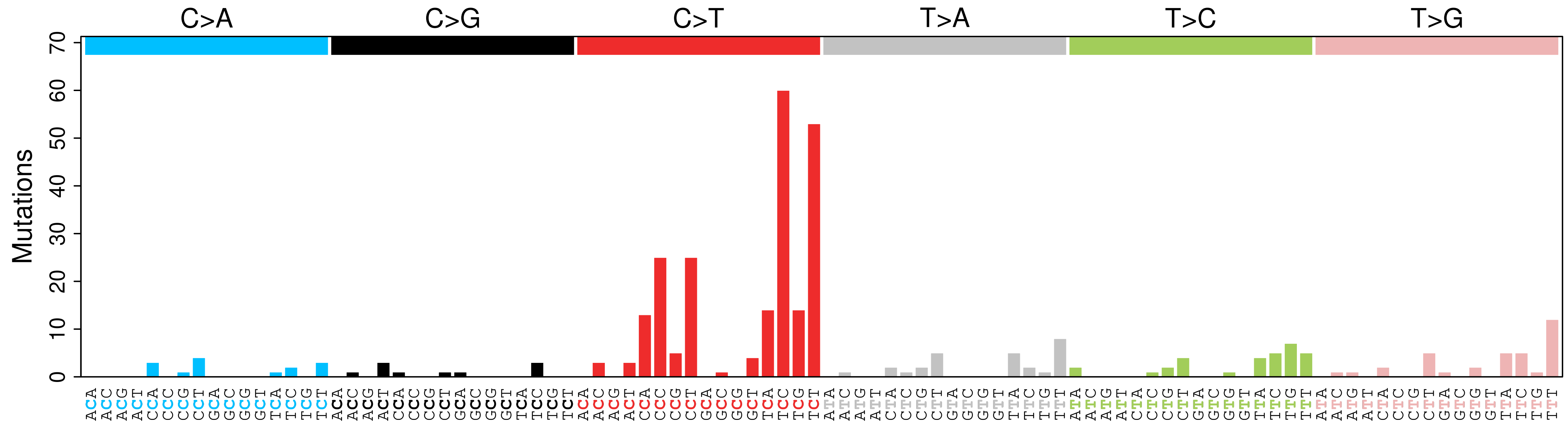
CATD256a (279 mutations)



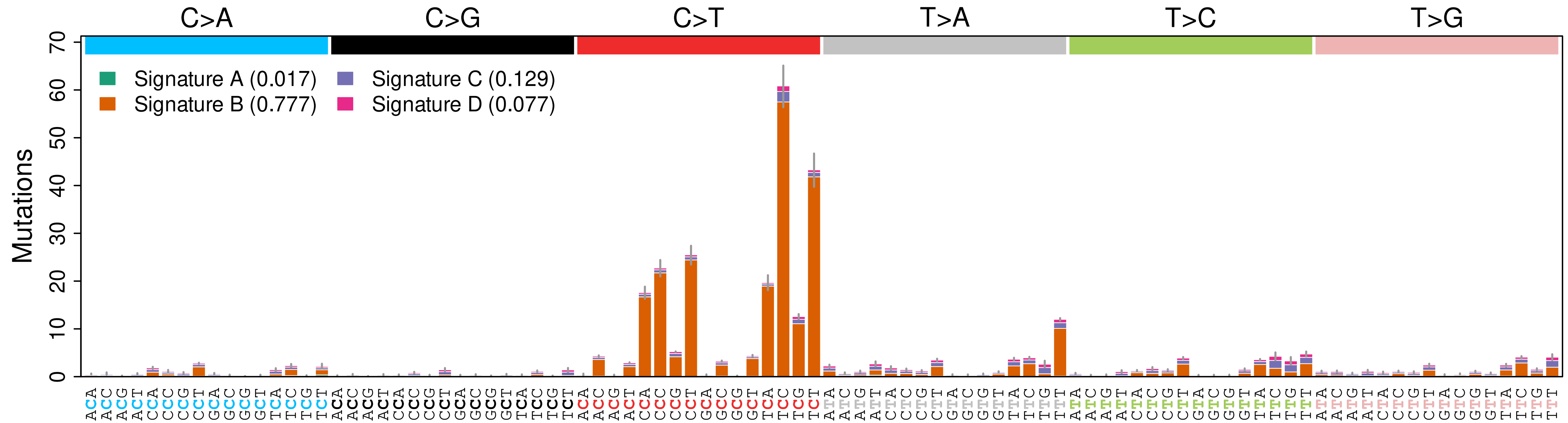
Reconstructed spectrum (cosine similarity = 0.967)



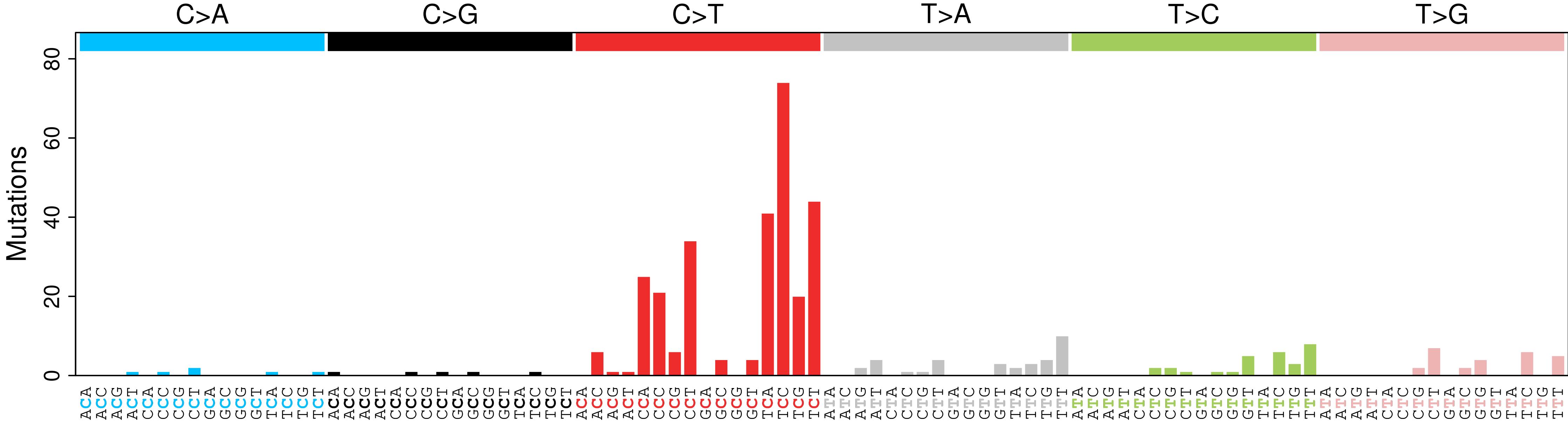
# CATD251a (337 mutations)



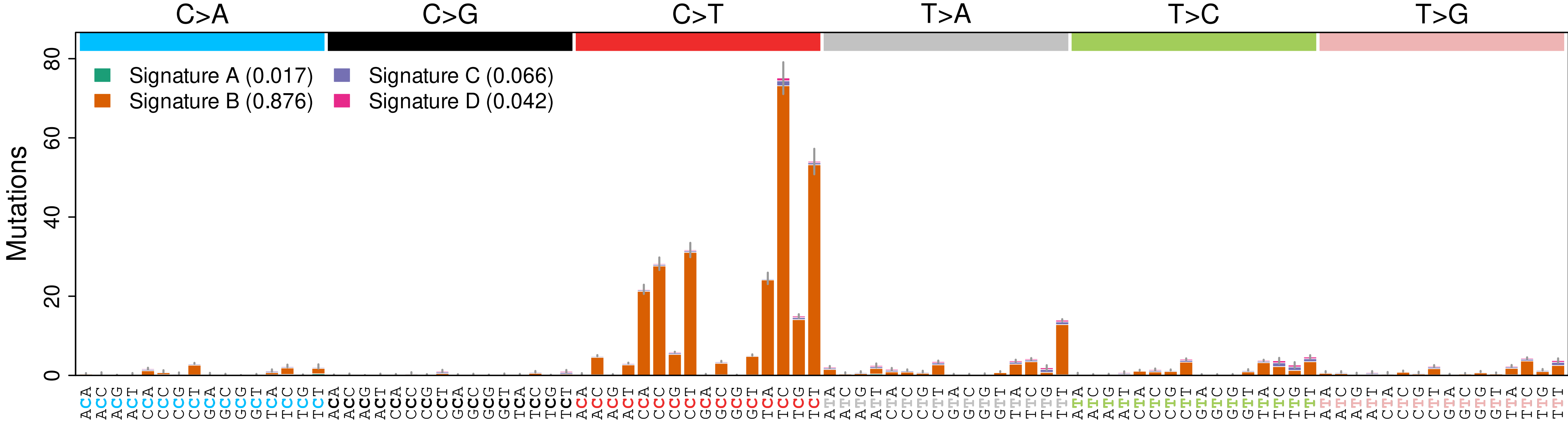
## Reconstructed spectrum (cosine similarity = 0.981)



CATD0132a (381 mutations)



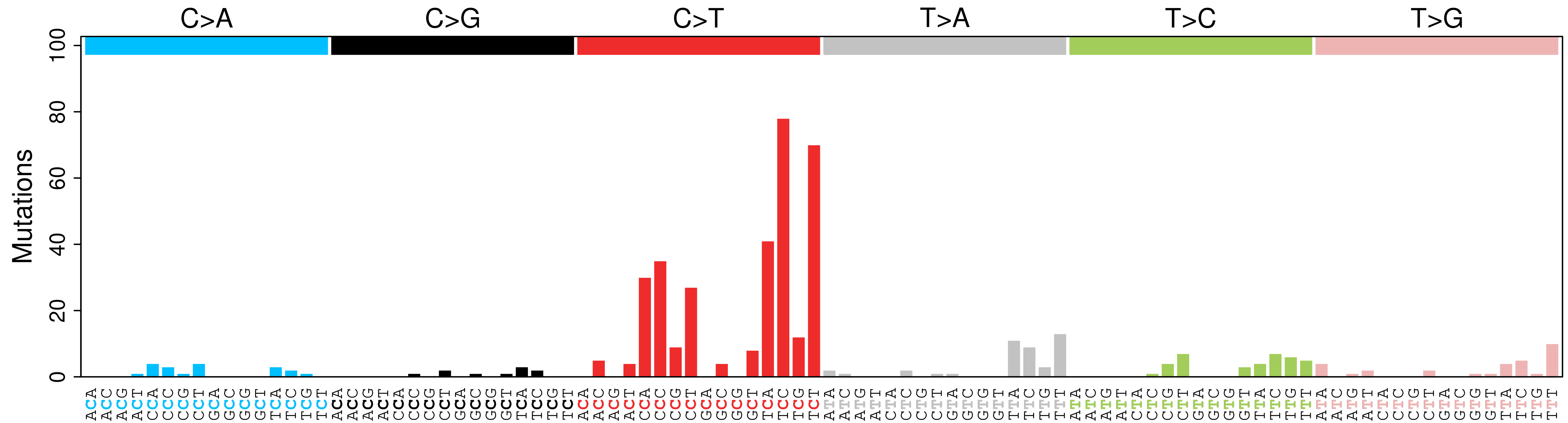
Reconstructed spectrum (cosine similarity = 0.974)





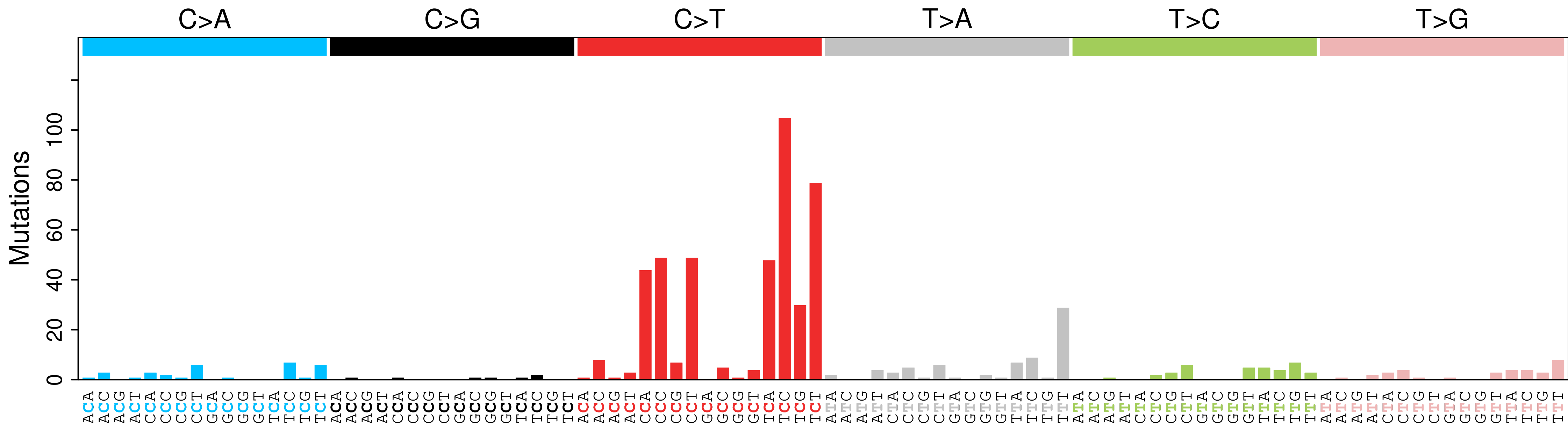


# CATD248a (463 mutations)

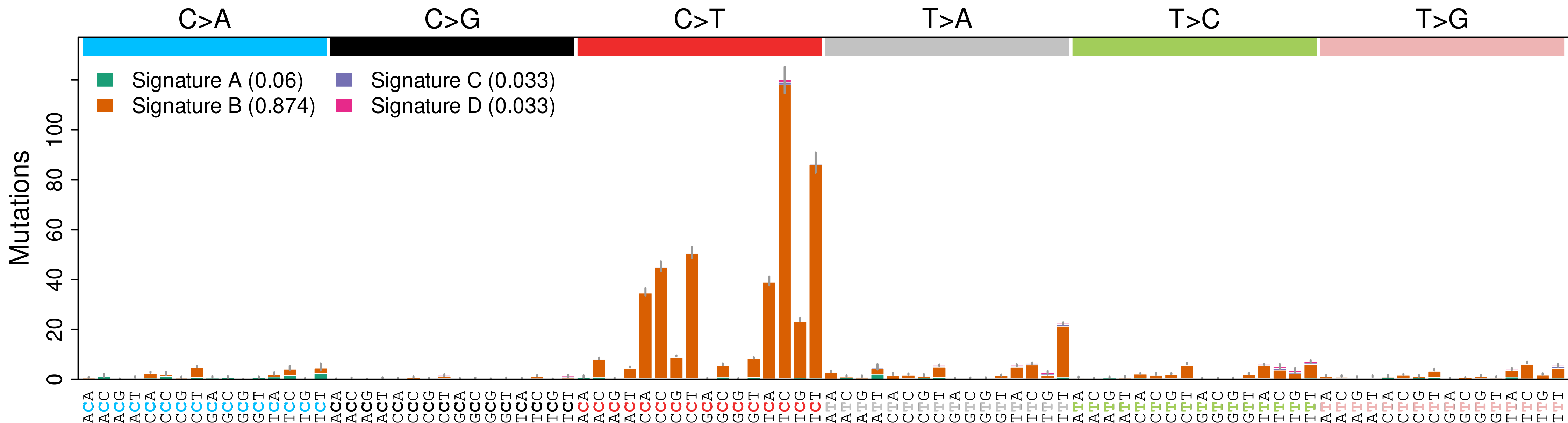




CATD0122a (614 mutations)

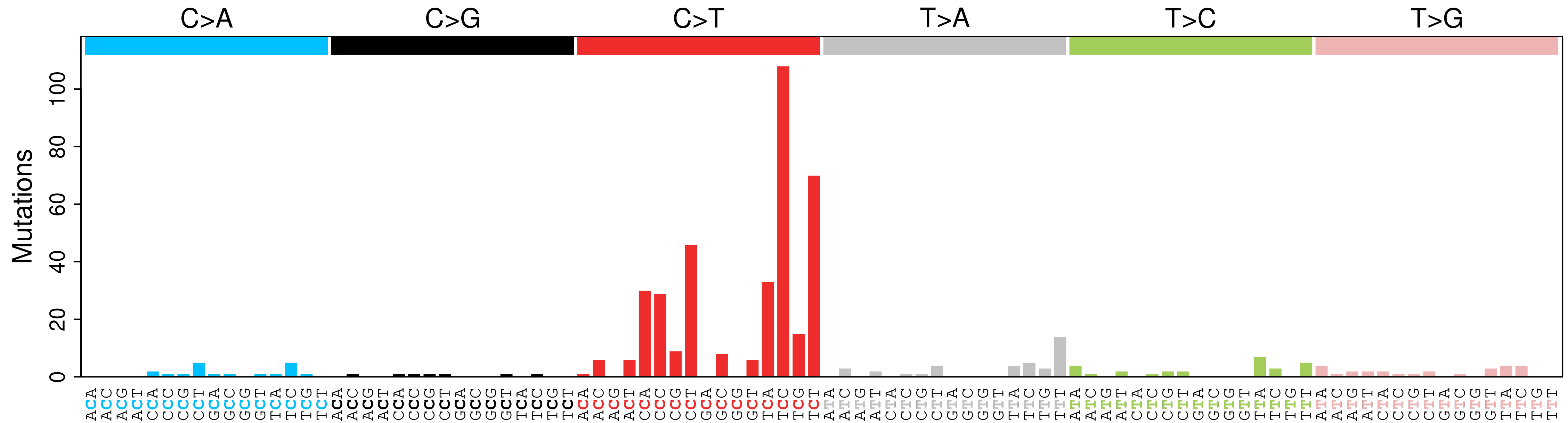


Reconstructed spectrum (cosine similarity = 0.989)

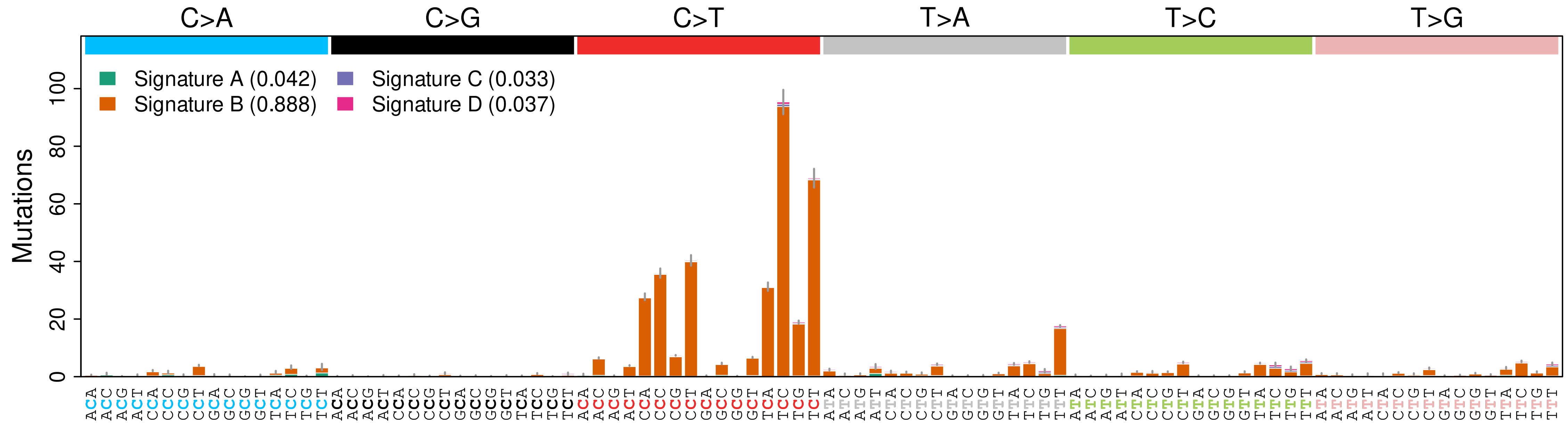




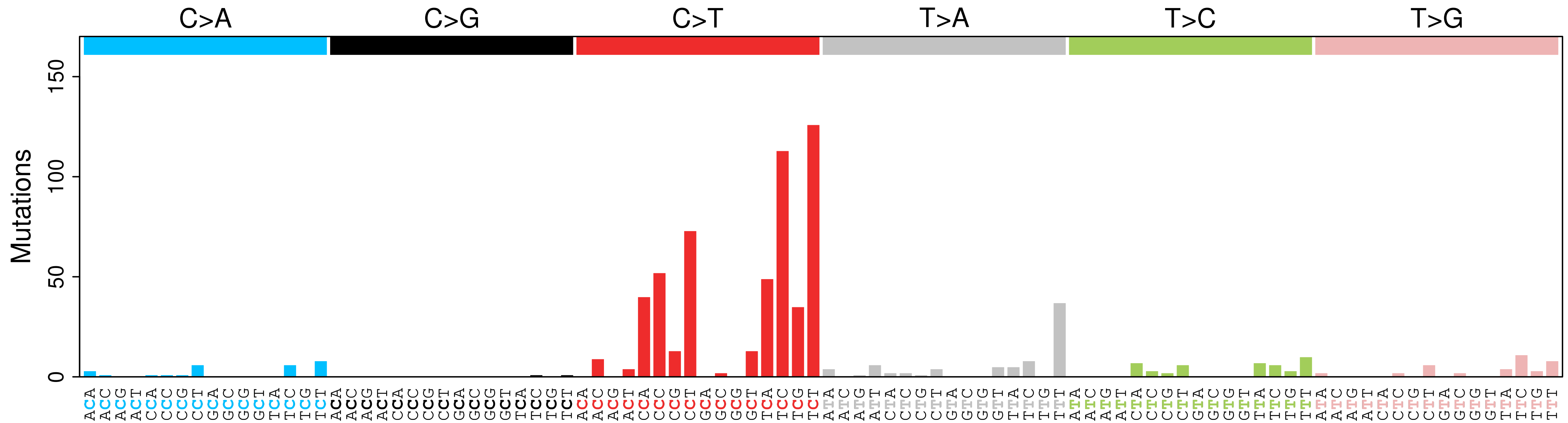
# CATD252a (484 mutations)



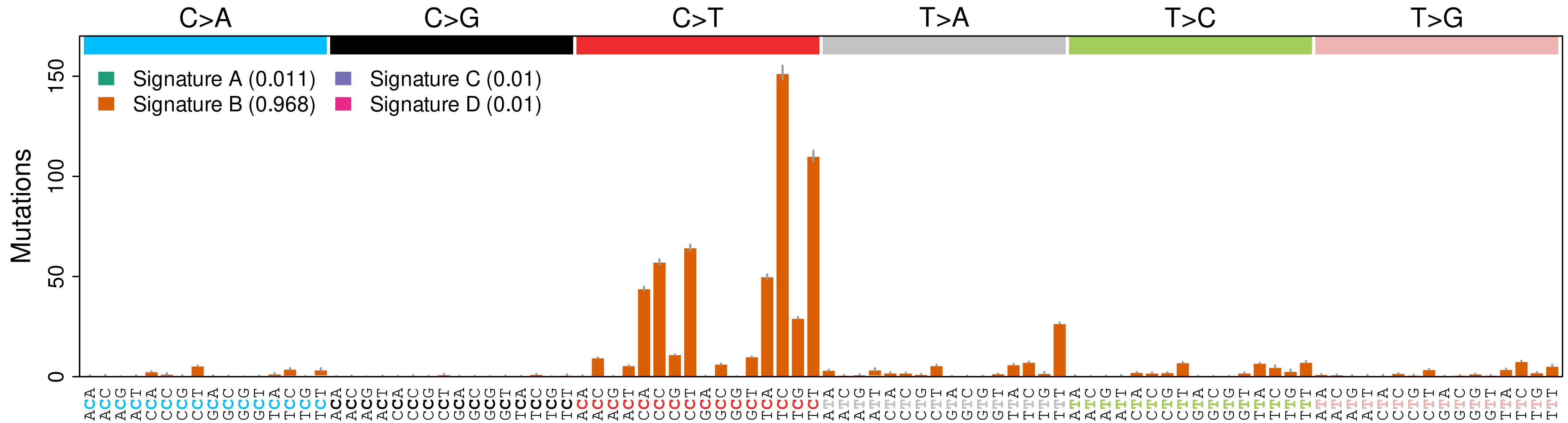
## Reconstructed spectrum (cosine similarity = 0.992)



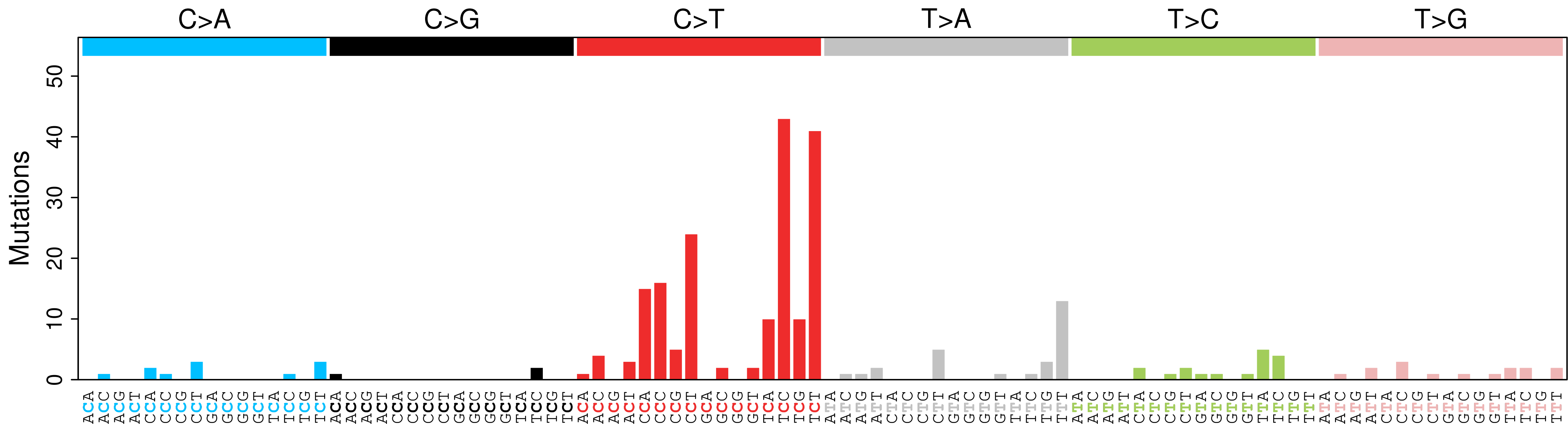
# CATD268a (715 mutations)



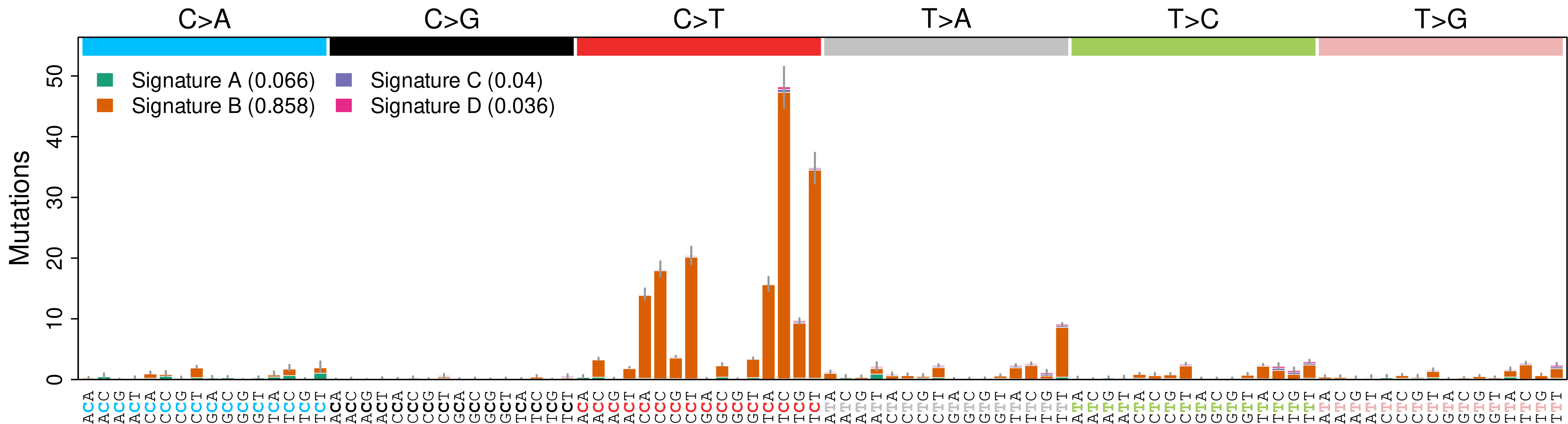
## Reconstructed spectrum (cosine similarity = 0.978)



CATD187a (249 mutations)



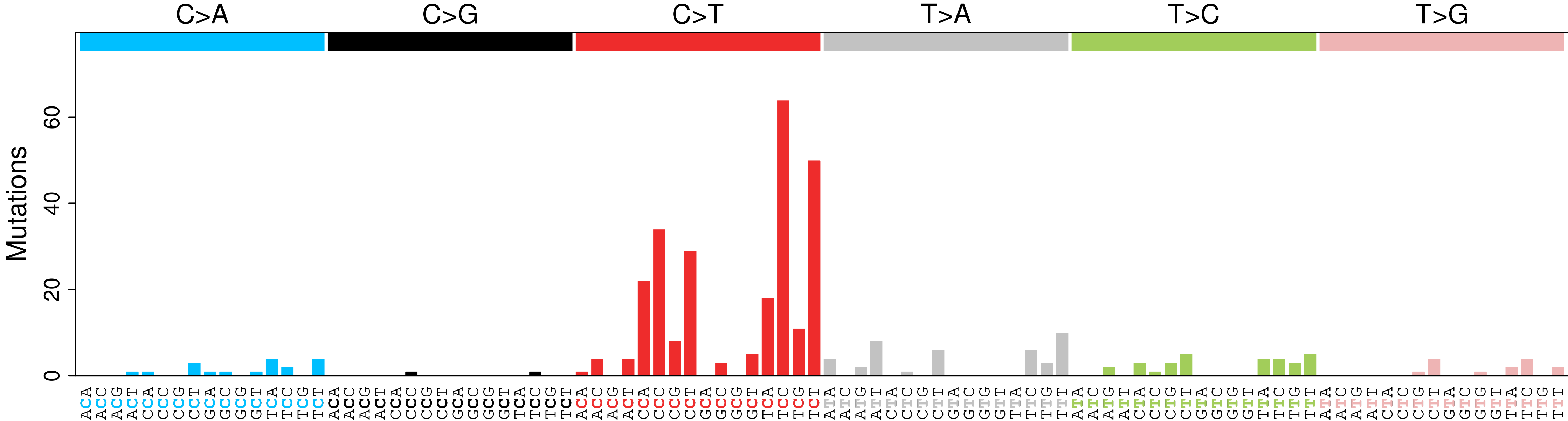
Reconstructed spectrum (cosine similarity = 0.98)



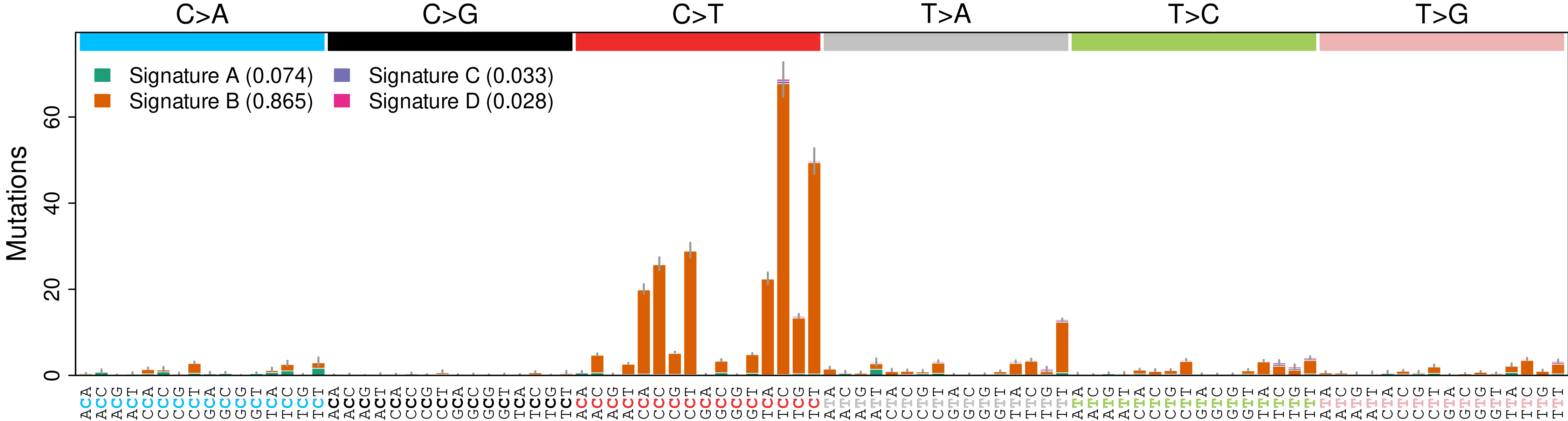




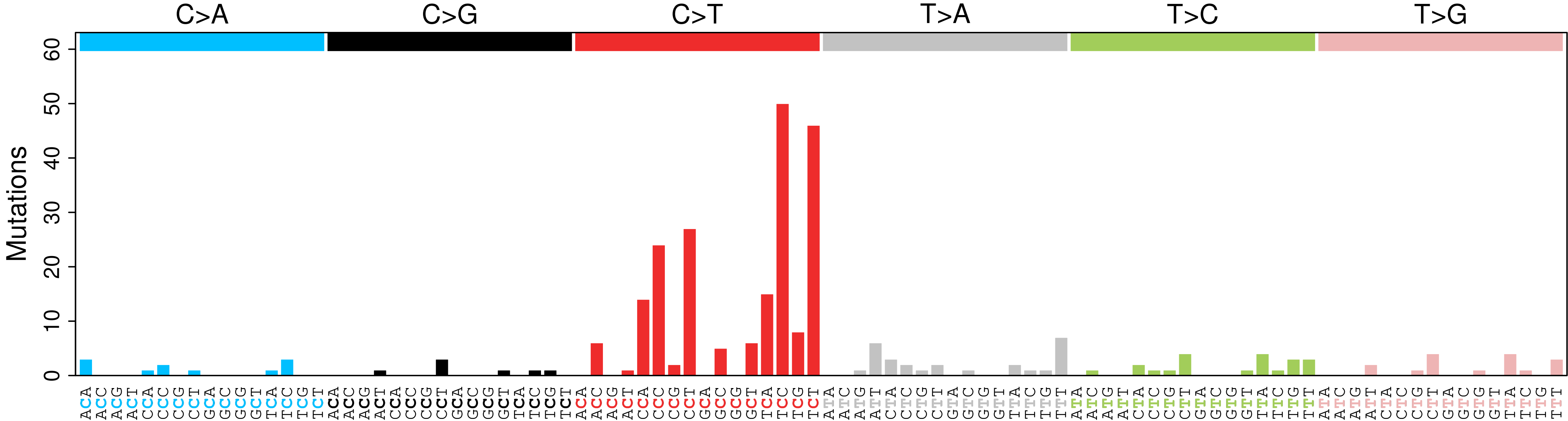
CATD255a (357 mutations)



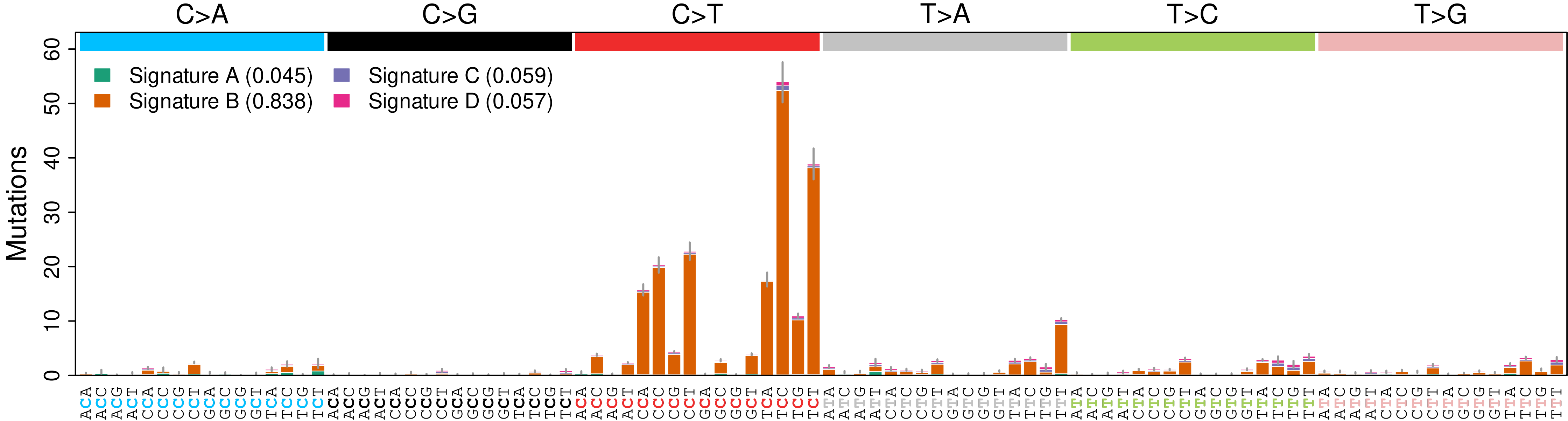
Reconstructed spectrum (cosine similarity = 0.988)



CATD244a (286 mutations)

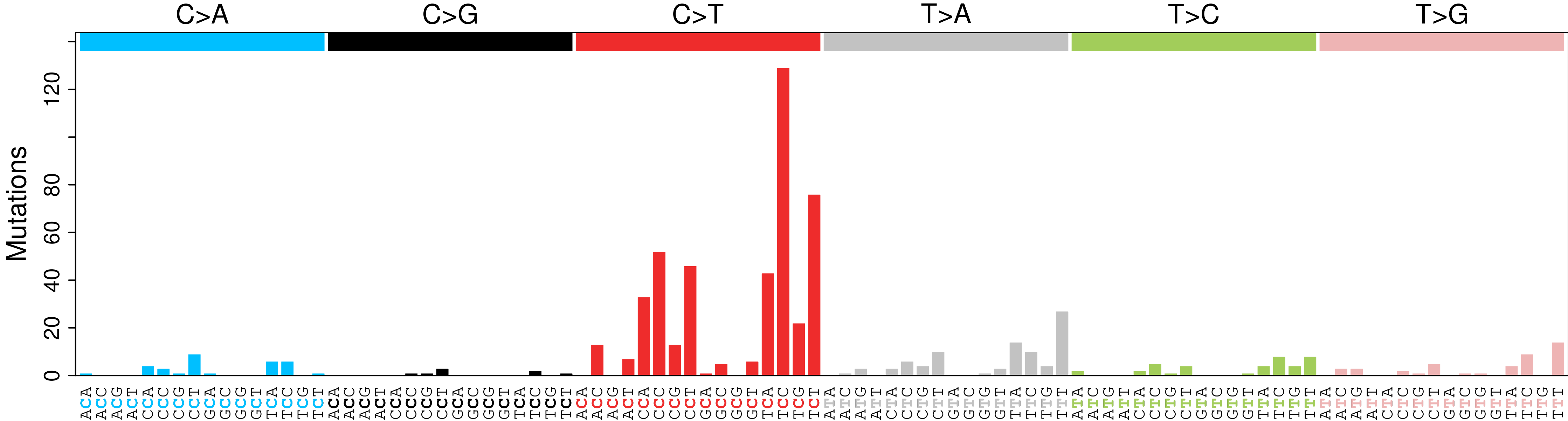


Reconstructed spectrum (cosine similarity = 0.983)

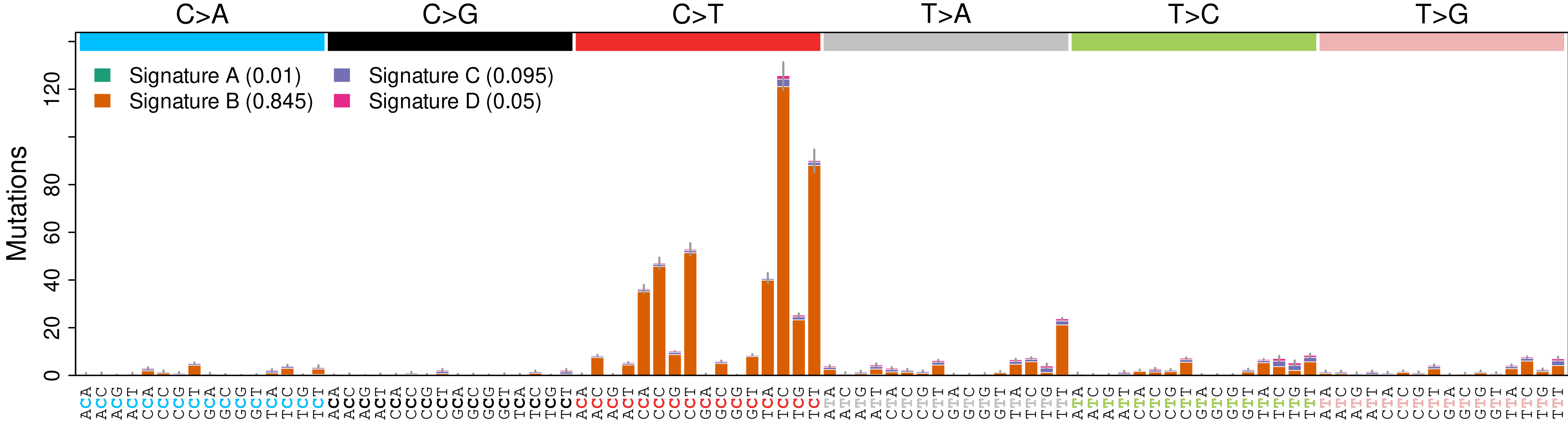




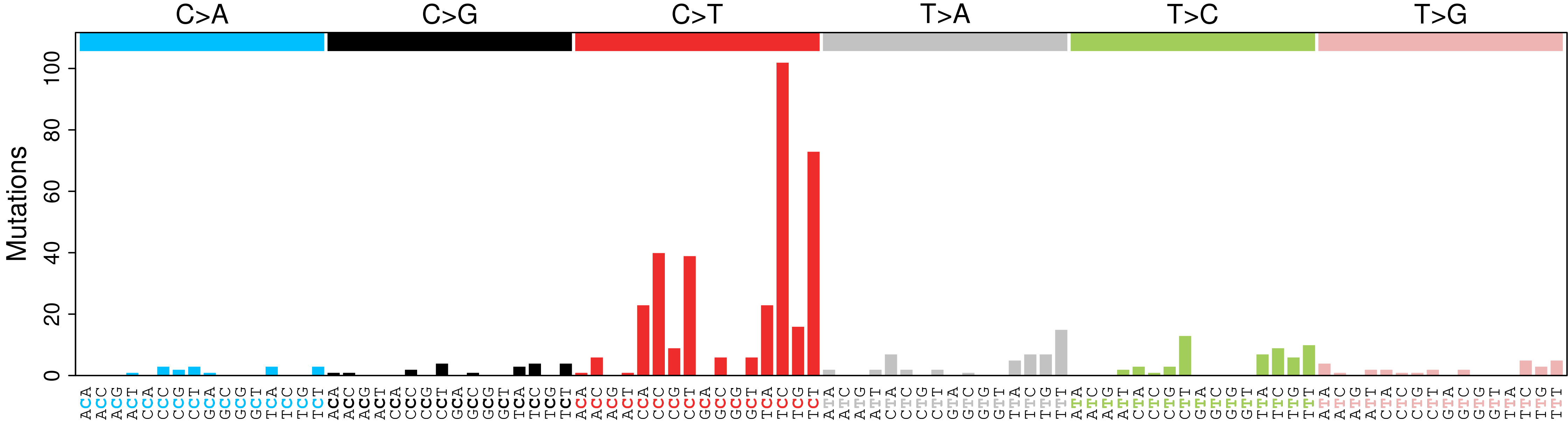
CATD0120a (654 mutations)



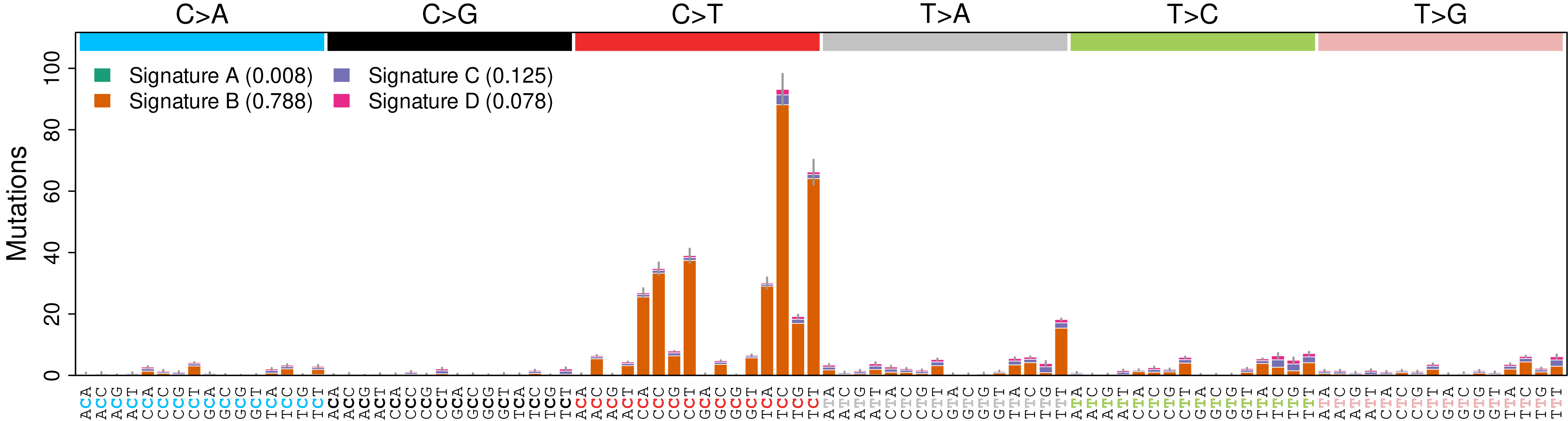
Reconstructed spectrum (cosine similarity = 0.991)



CATD247a (513 mutations)

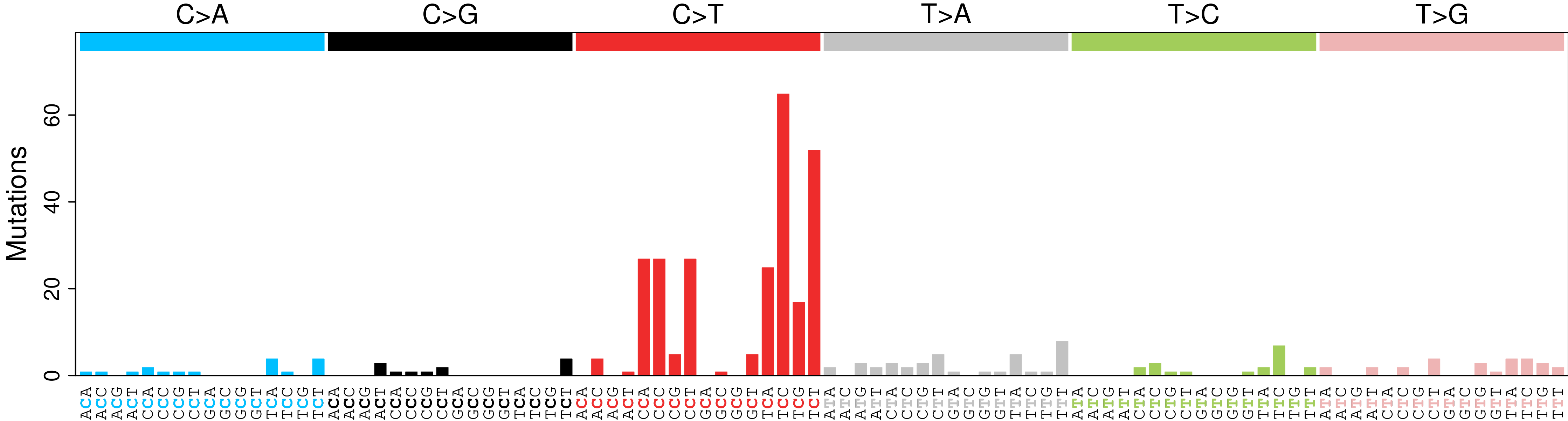


Reconstructed spectrum (cosine similarity = 0.99)

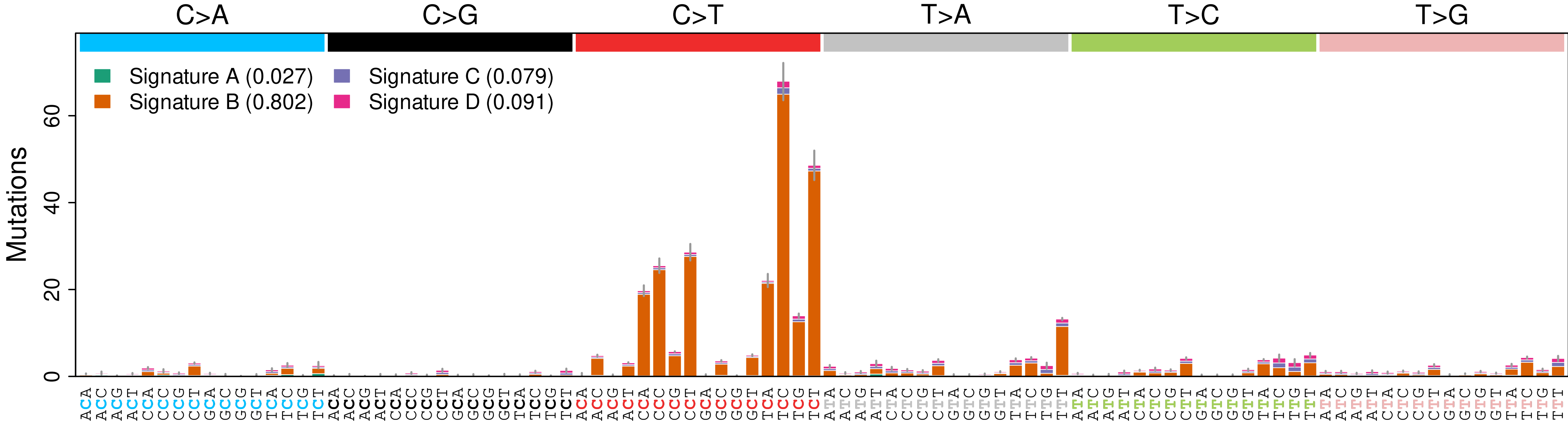




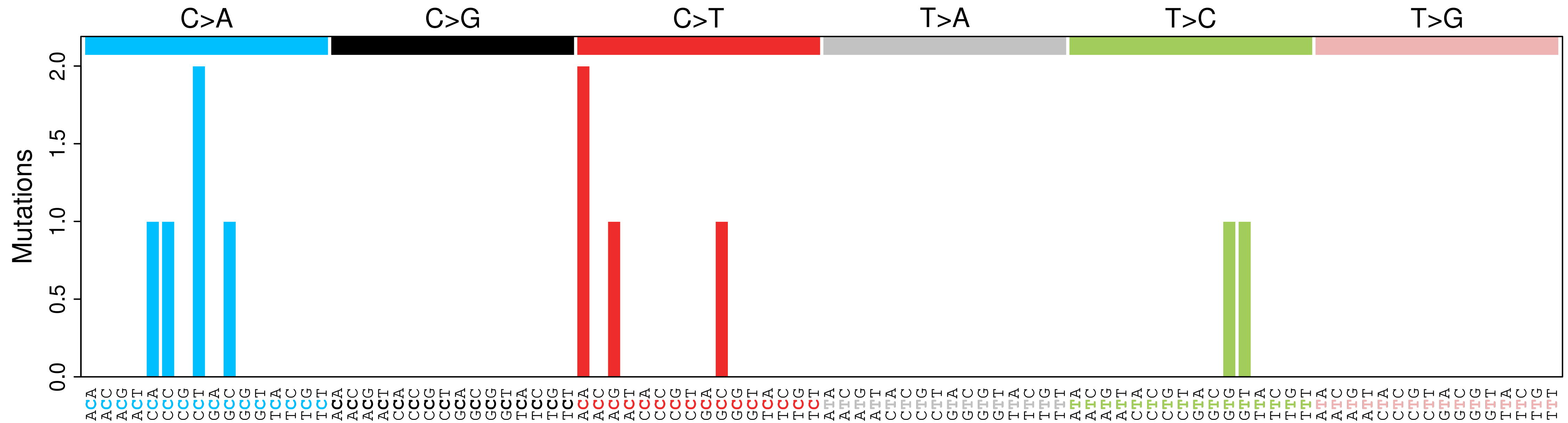
CATD246a (369 mutations)



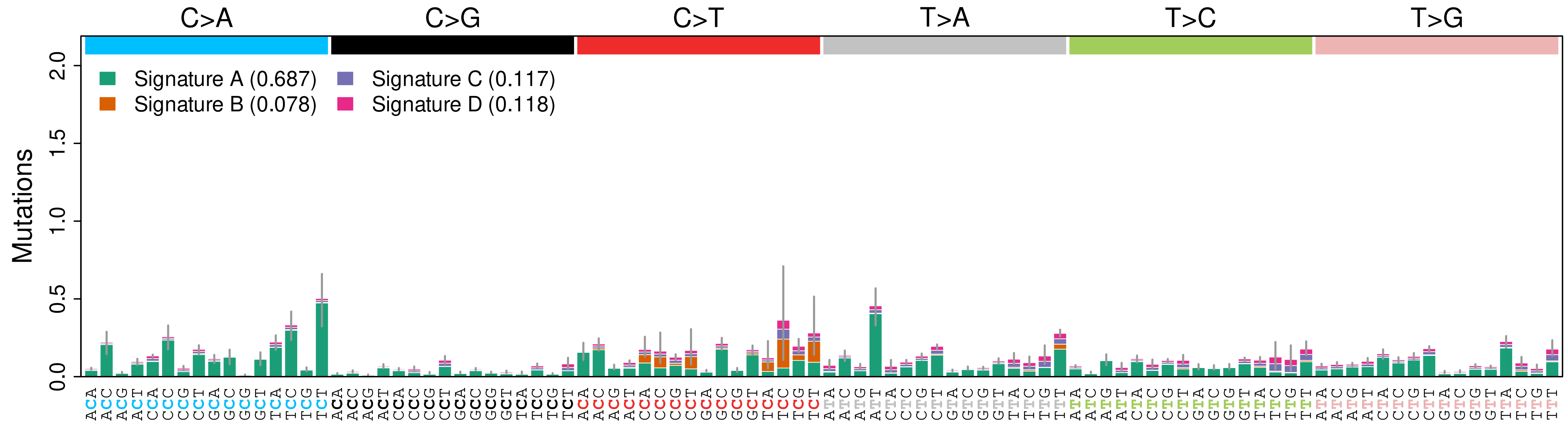
Reconstructed spectrum (cosine similarity = 0.988)



### CATD279a (11 mutations)

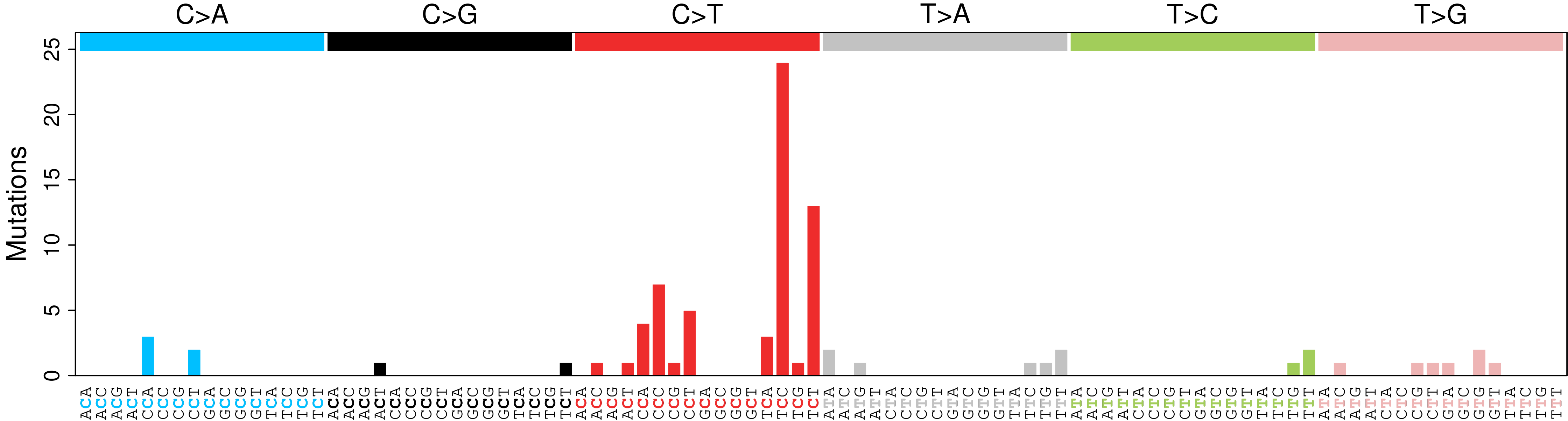


### Reconstructed spectrum (cosine similarity = 0.302)

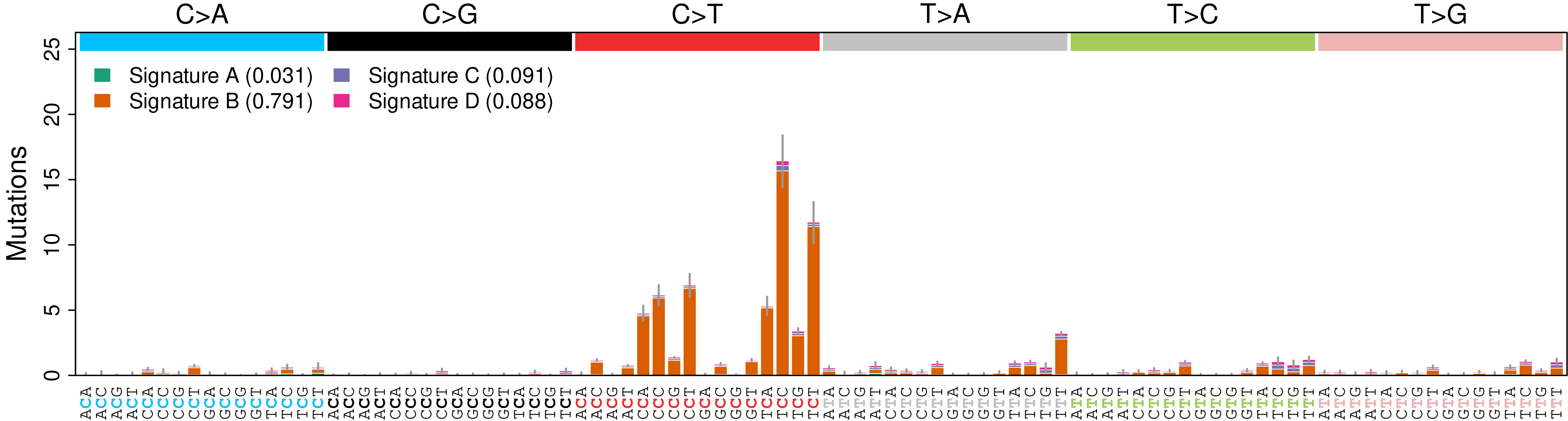




CATD280a (84 mutations)

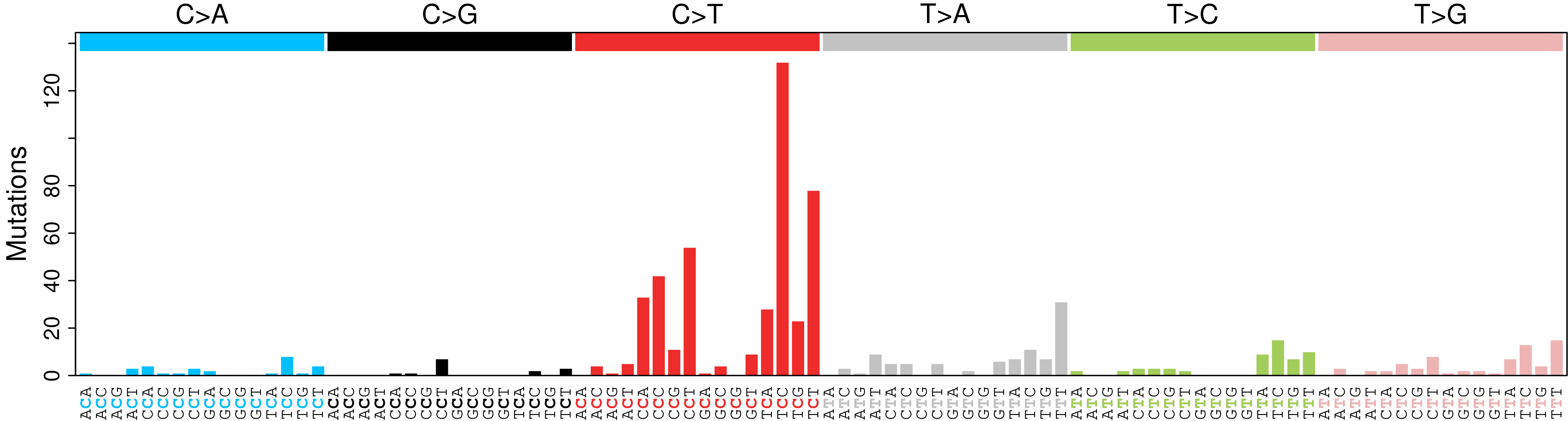


Reconstructed spectrum (cosine similarity = 0.946)

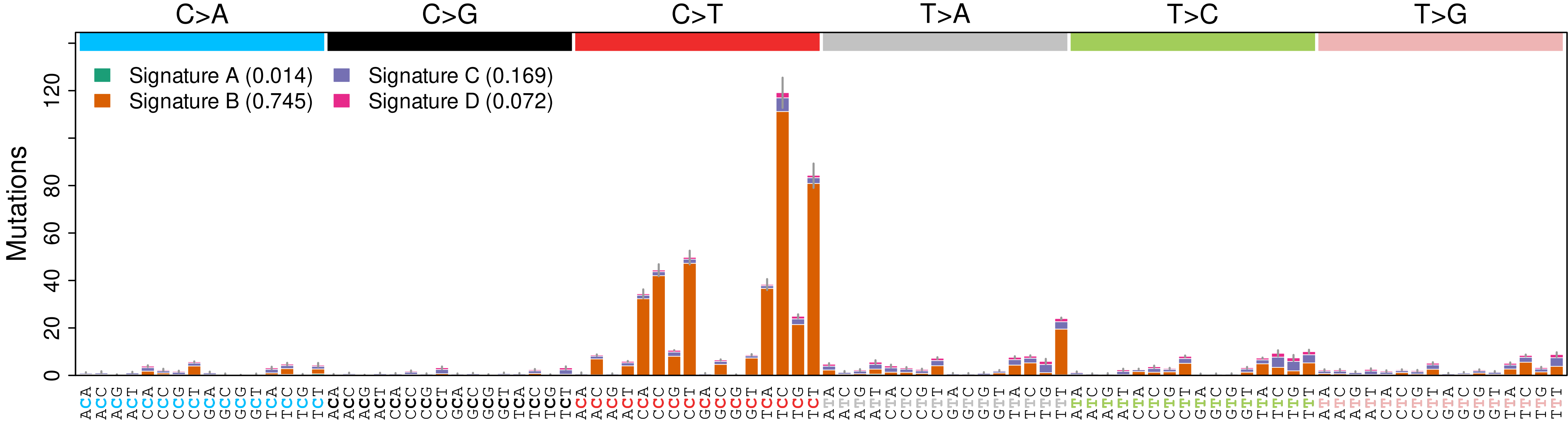




CATD272a (684 mutations)

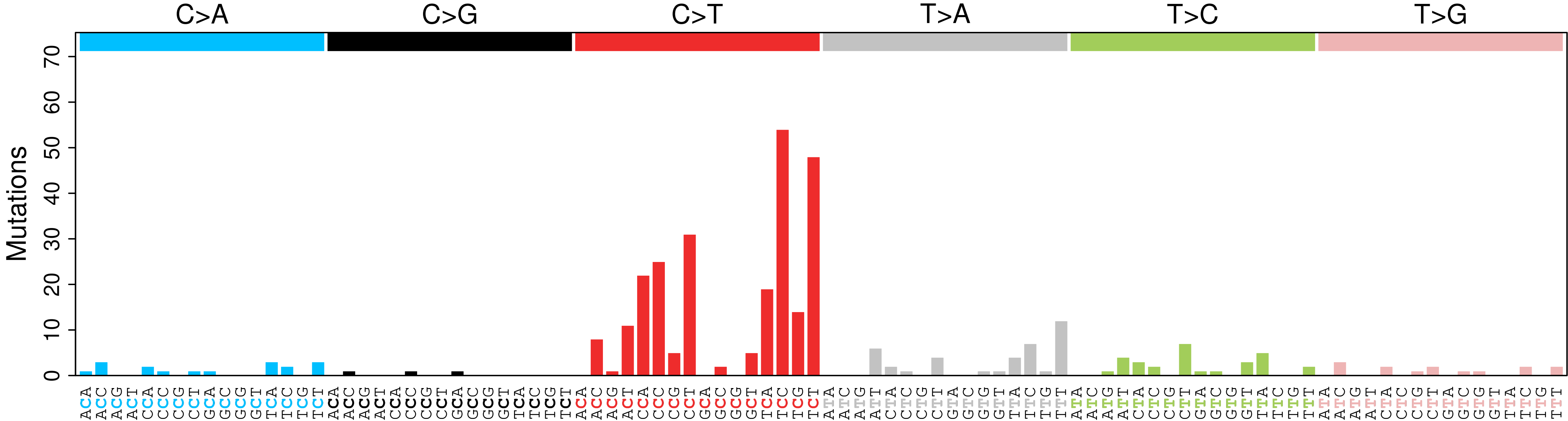


Reconstructed spectrum (cosine similarity = 0.989)

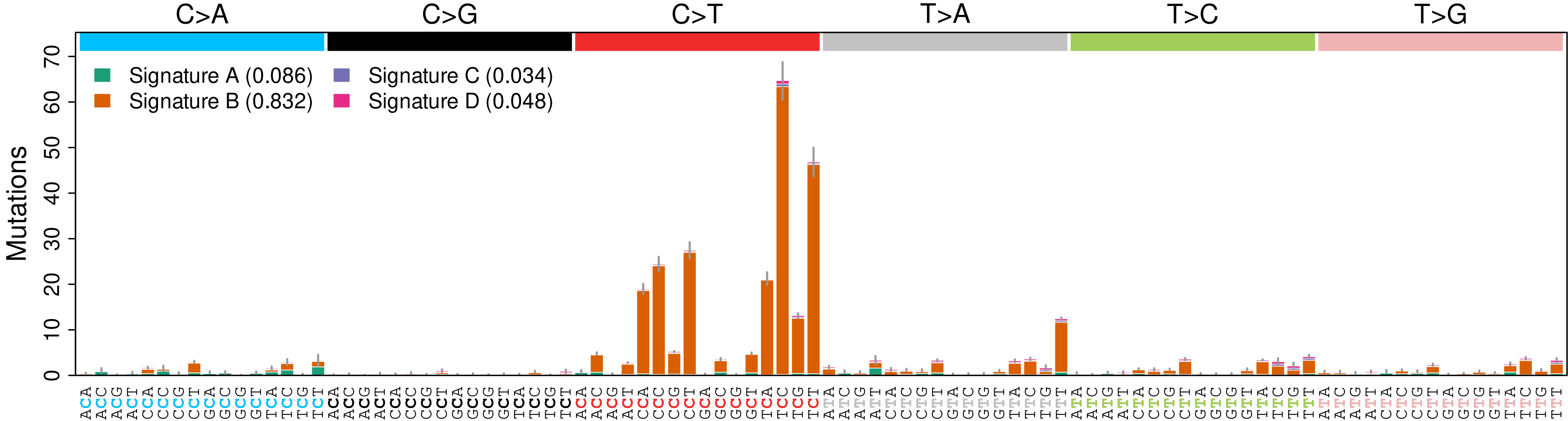




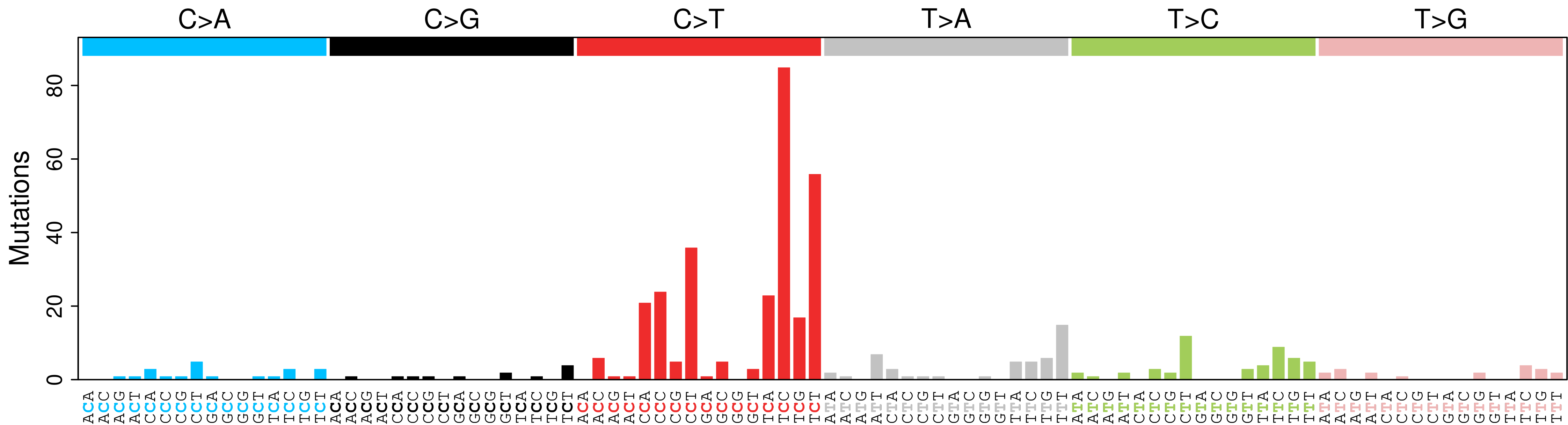
CATD276a (347 mutations)



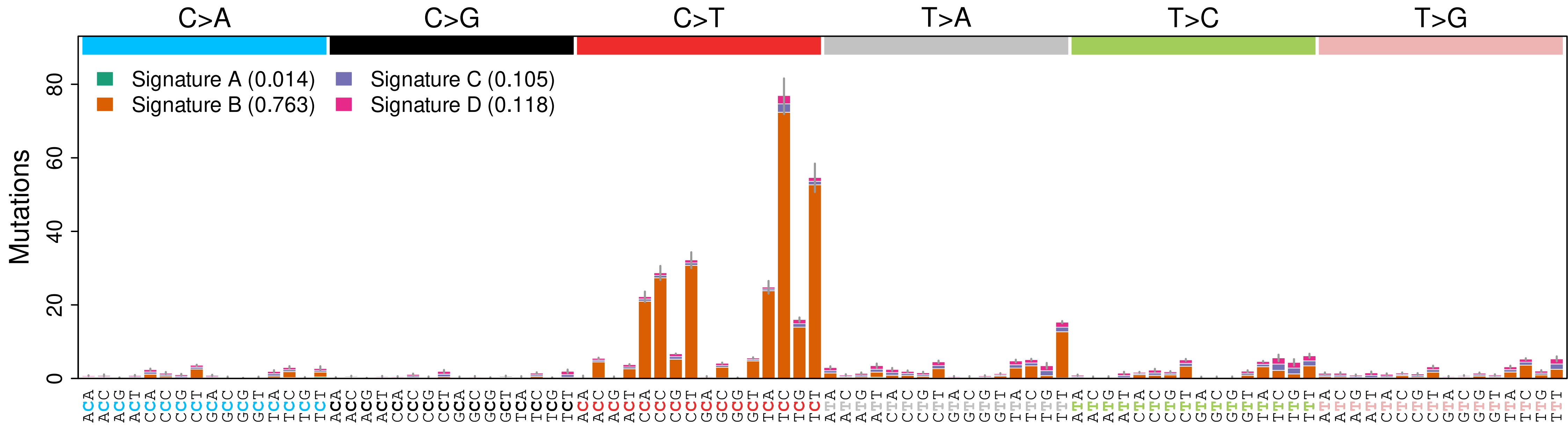
Reconstructed spectrum (cosine similarity = 0.981)



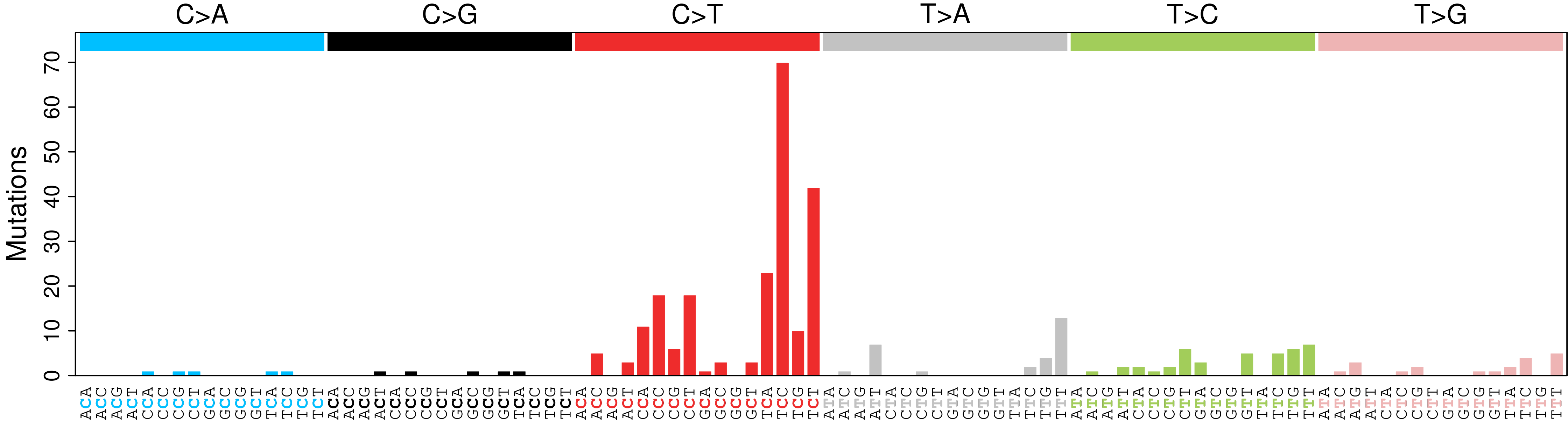
CATD0128a (433 mutations)



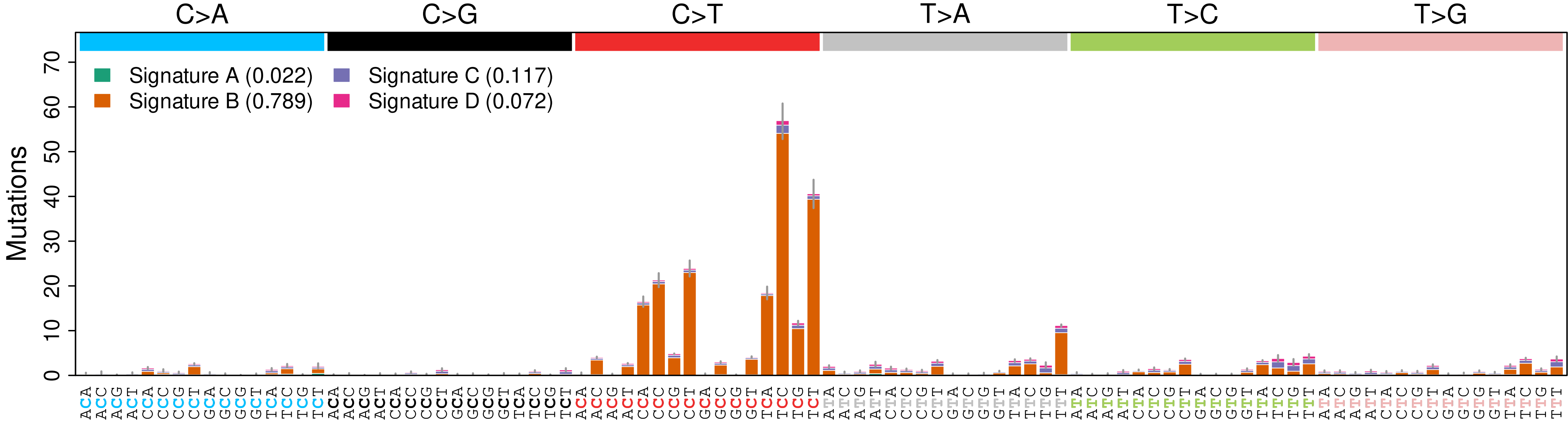
Reconstructed spectrum (cosine similarity = 0.991)



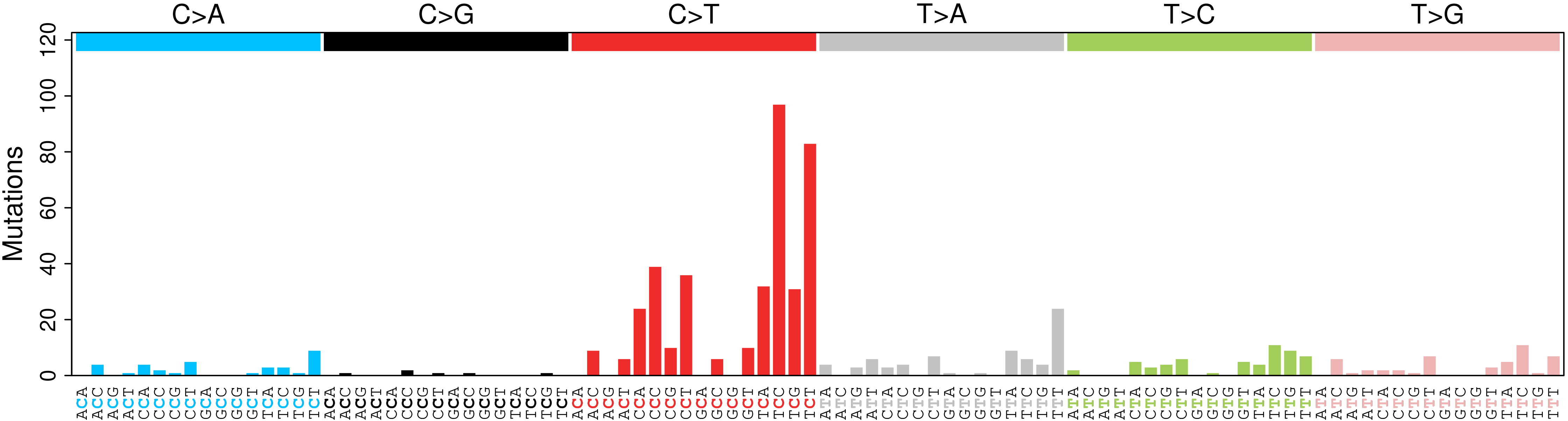
CATD273a (311 mutations)



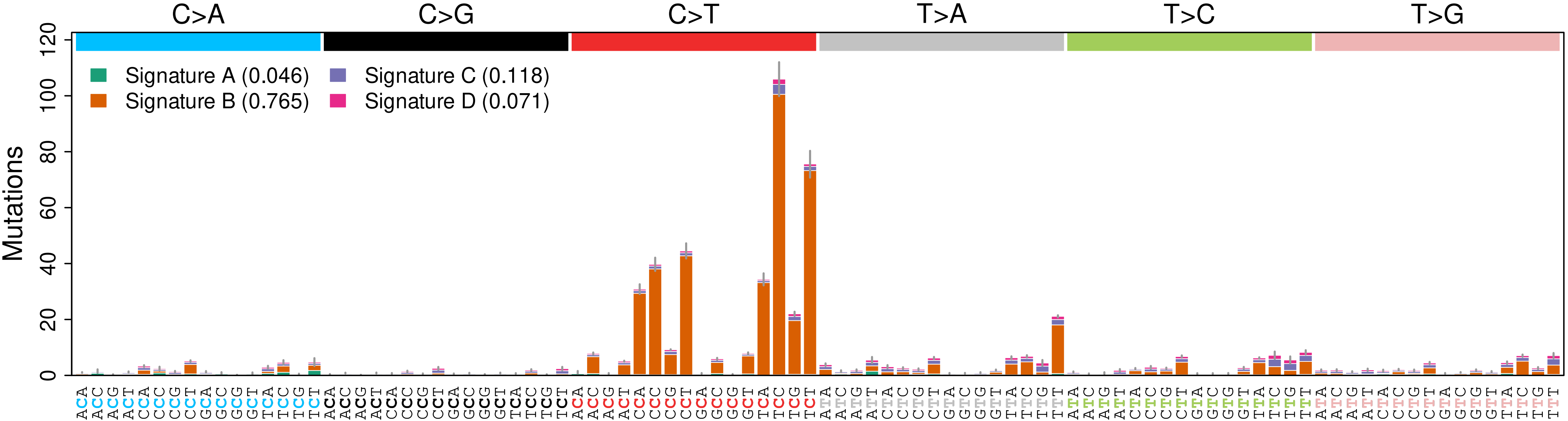
Reconstructed spectrum (cosine similarity = 0.977)



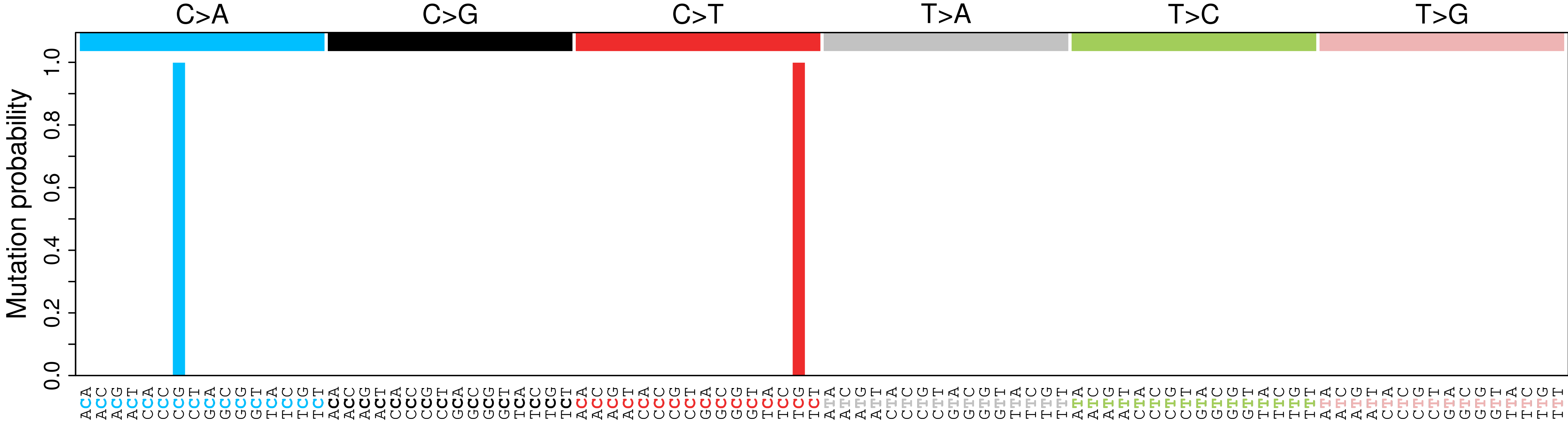
CATD253a (600 mutations)



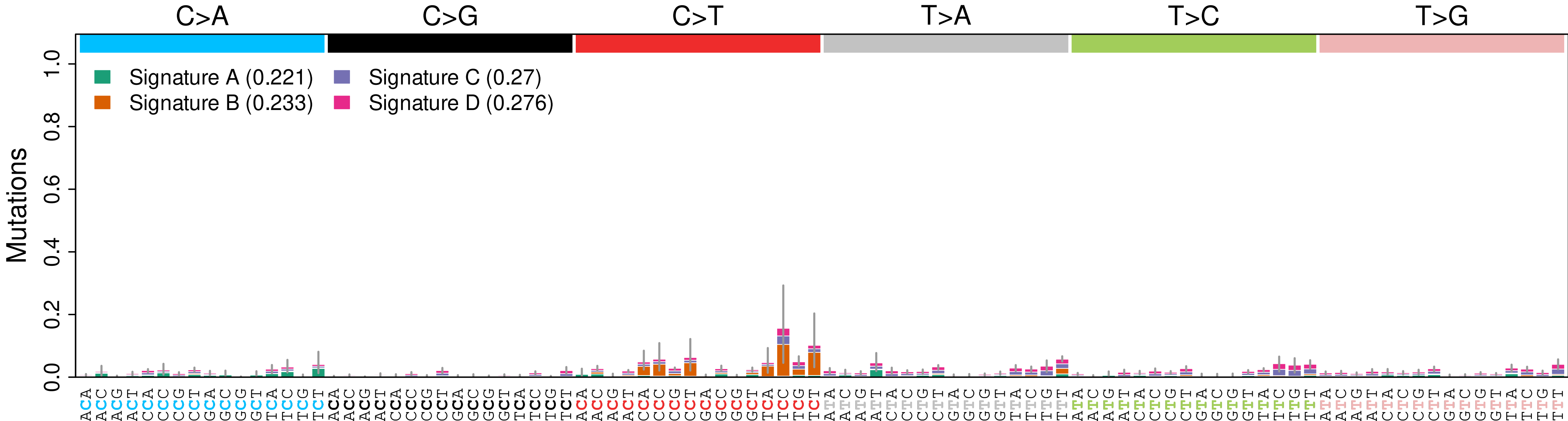
Reconstructed spectrum (cosine similarity = 0.989)



CATD267a

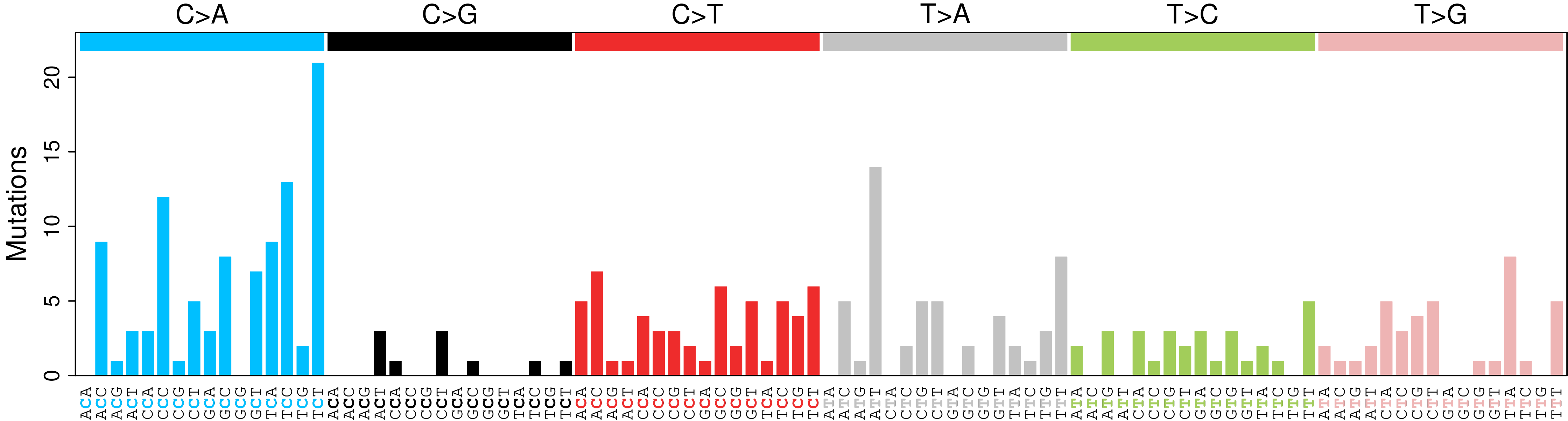


Reconstructed spectrum (cosine similarity = 0.146)

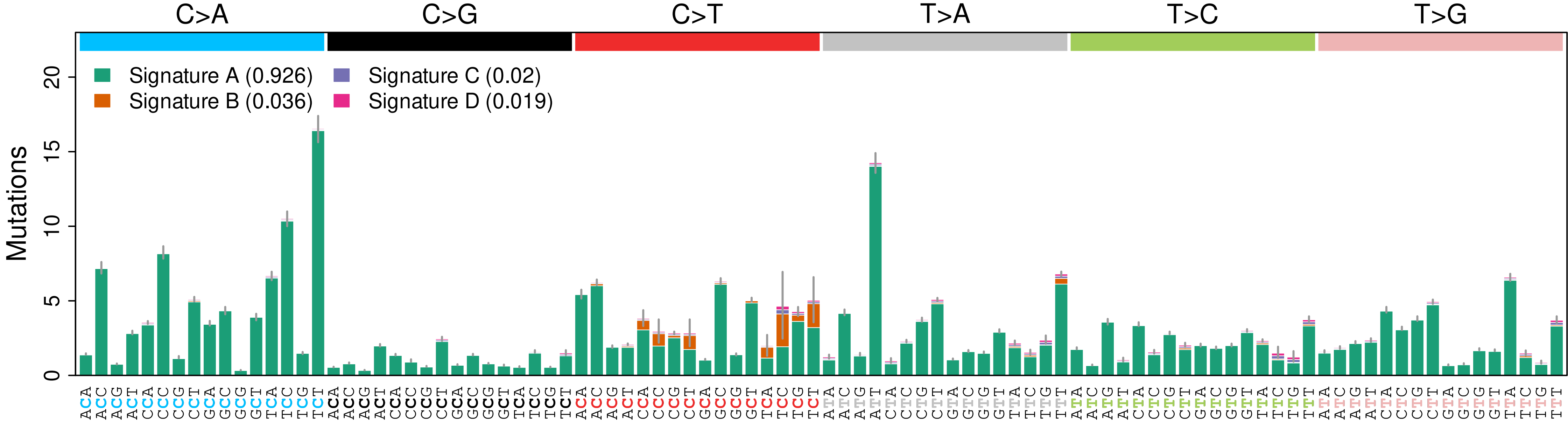




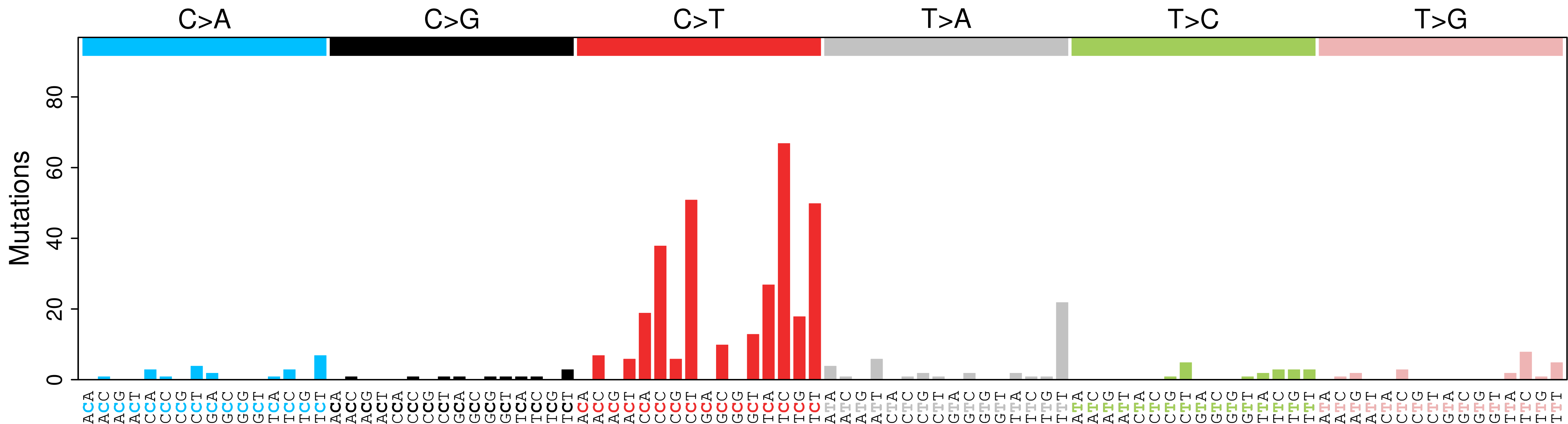
CATD186a (284 mutations)



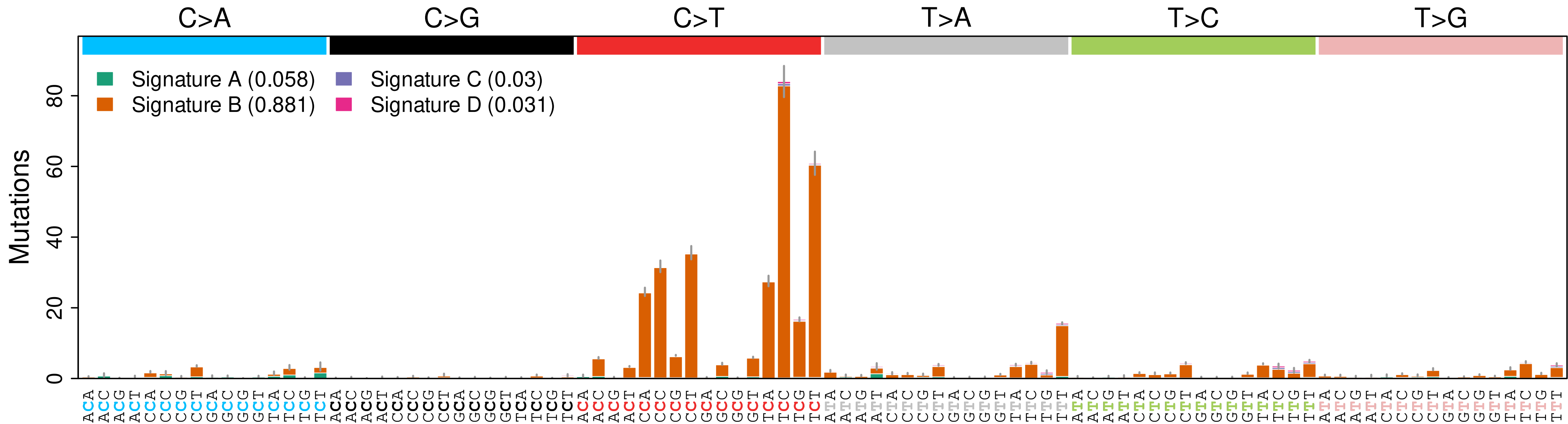
Reconstructed spectrum (cosine similarity = 0.975)



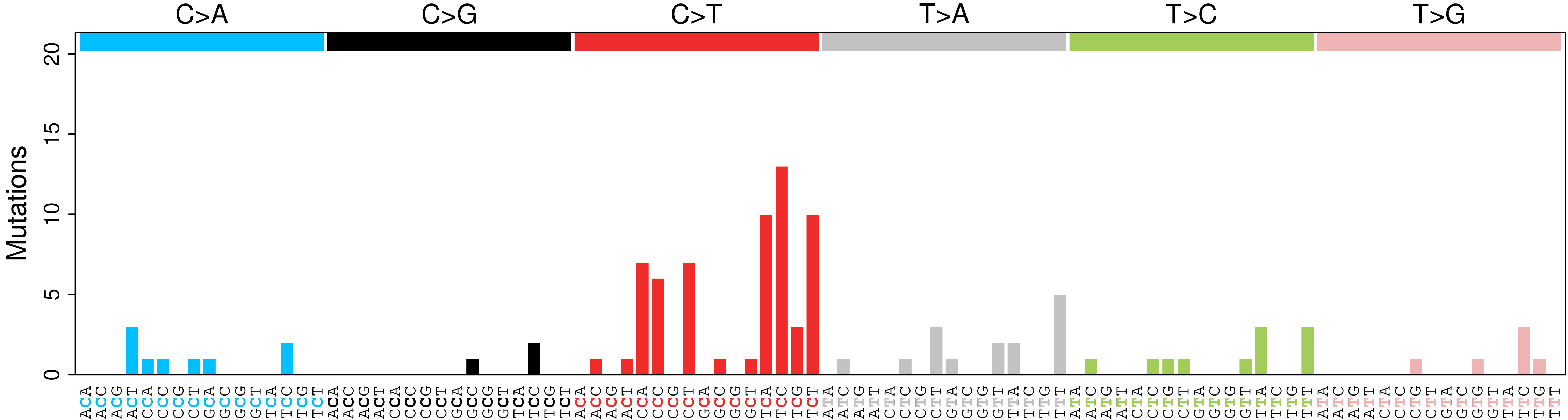
CATD0632c (428 mutations)



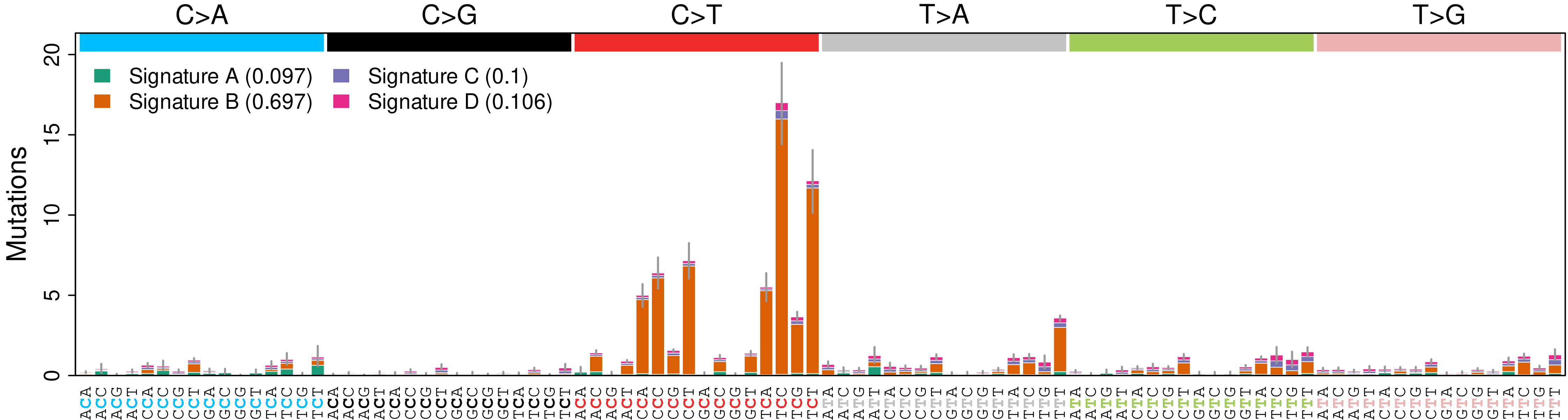
Reconstructed spectrum (cosine similarity = 0.968)



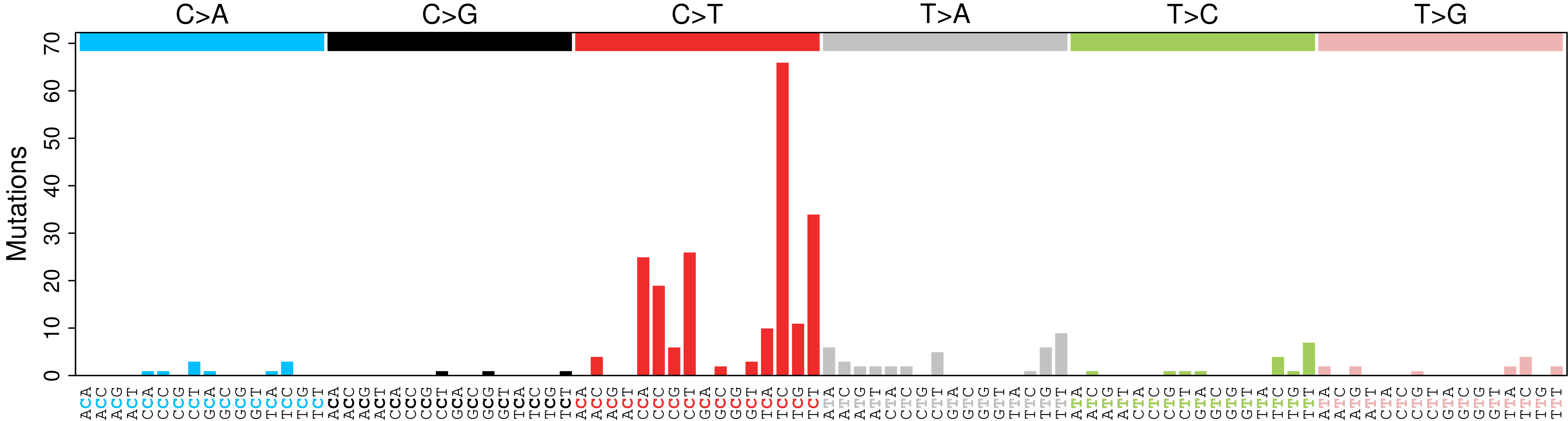
CATD0126a (104 mutations)



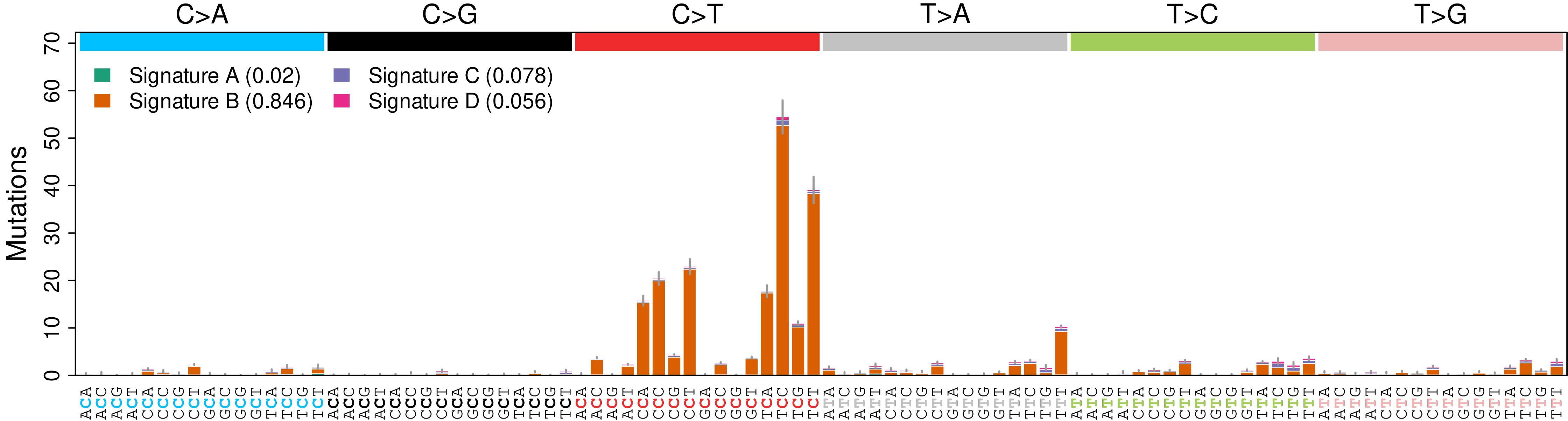
Reconstructed spectrum (cosine similarity = 0.923)



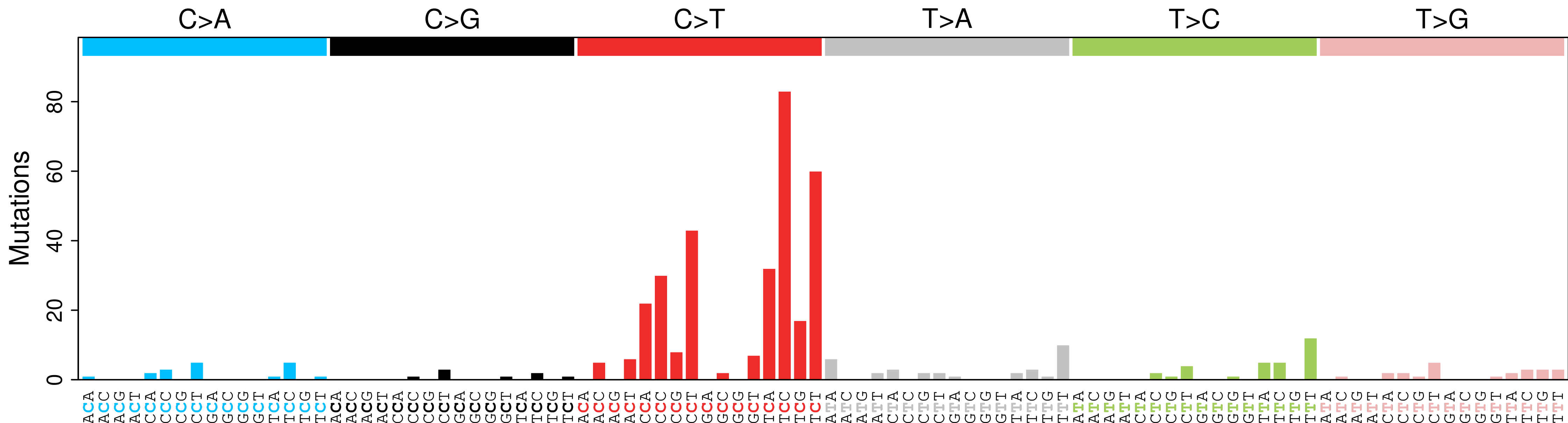
CATD274a (286 mutations)



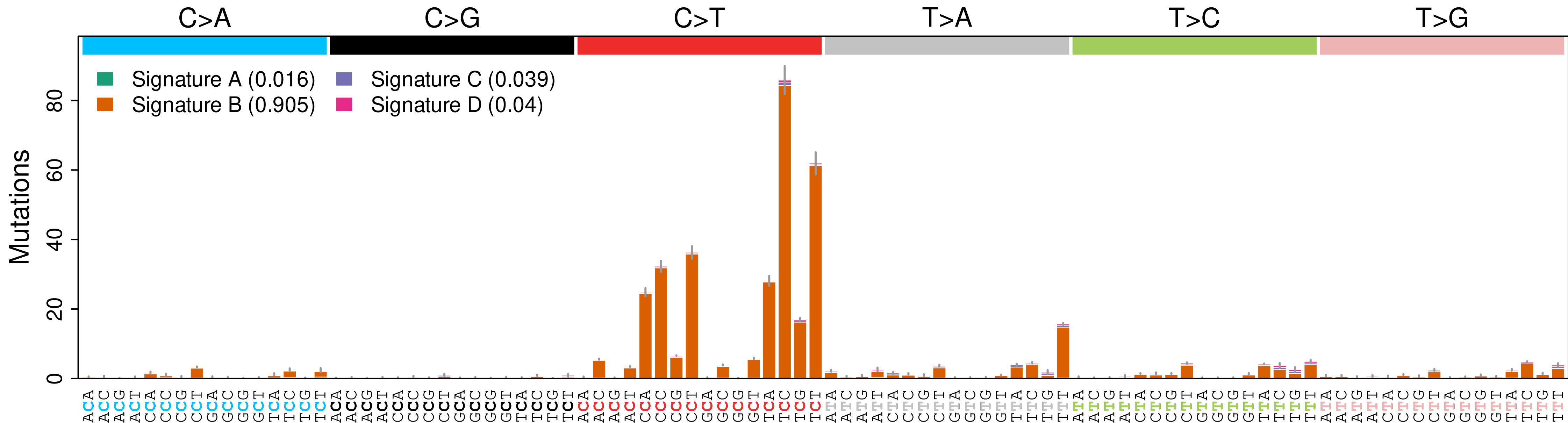
Reconstructed spectrum (cosine similarity = 0.973)



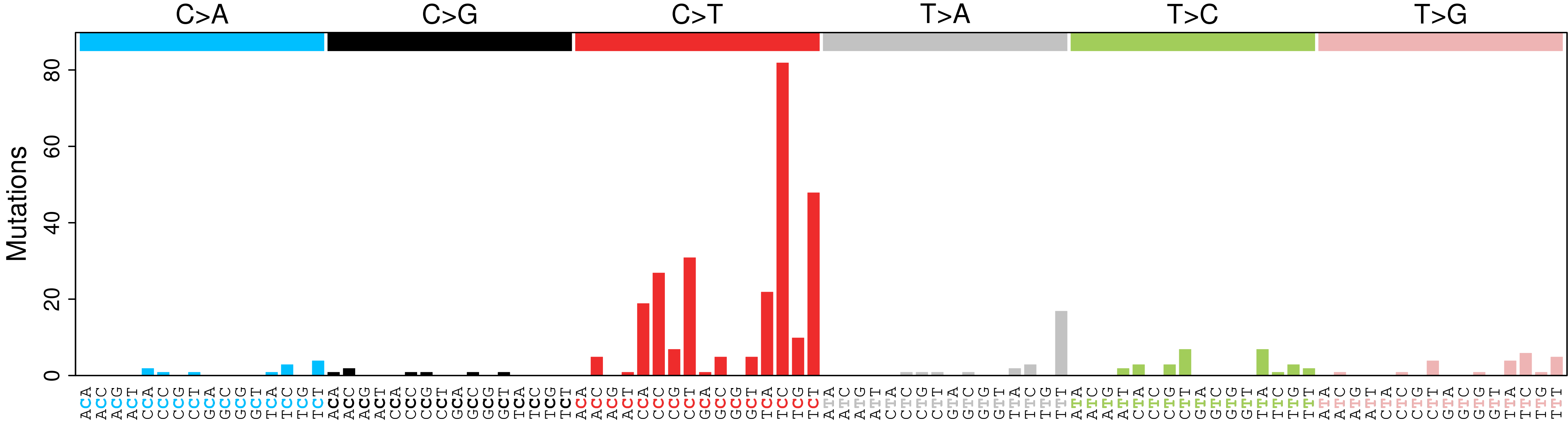
CATD278a (426 mutations)



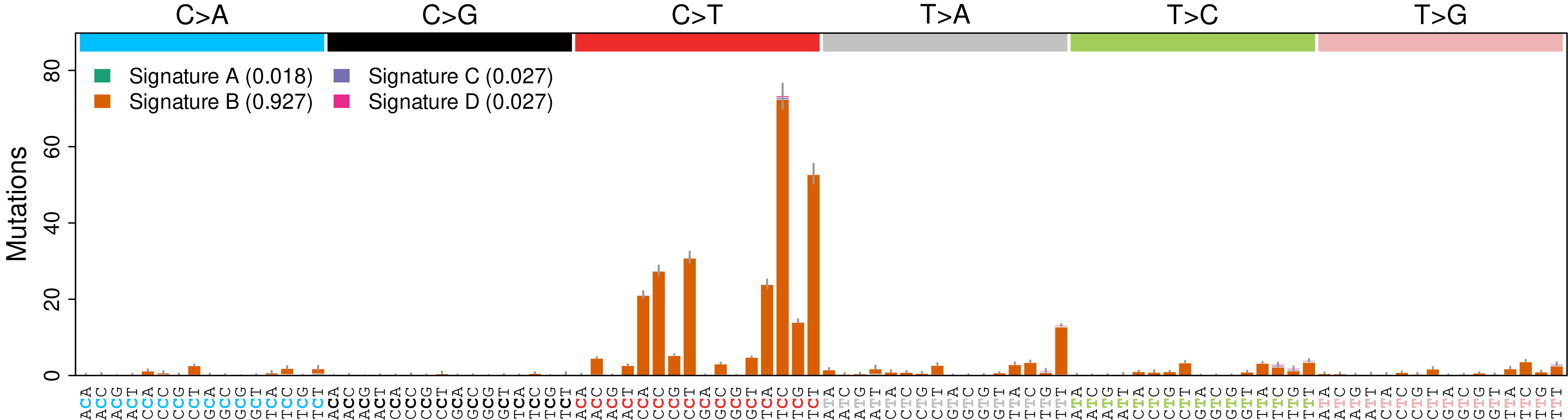
Reconstructed spectrum (cosine similarity = 0.991)



CATD243a (359 mutations)



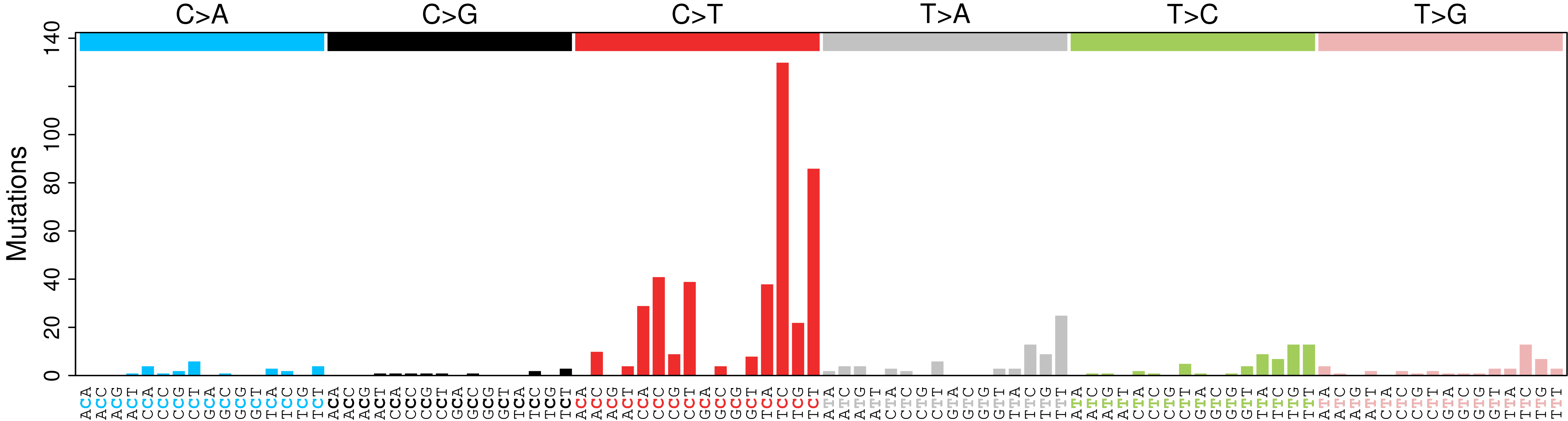
Reconstructed spectrum (cosine similarity = 0.99)



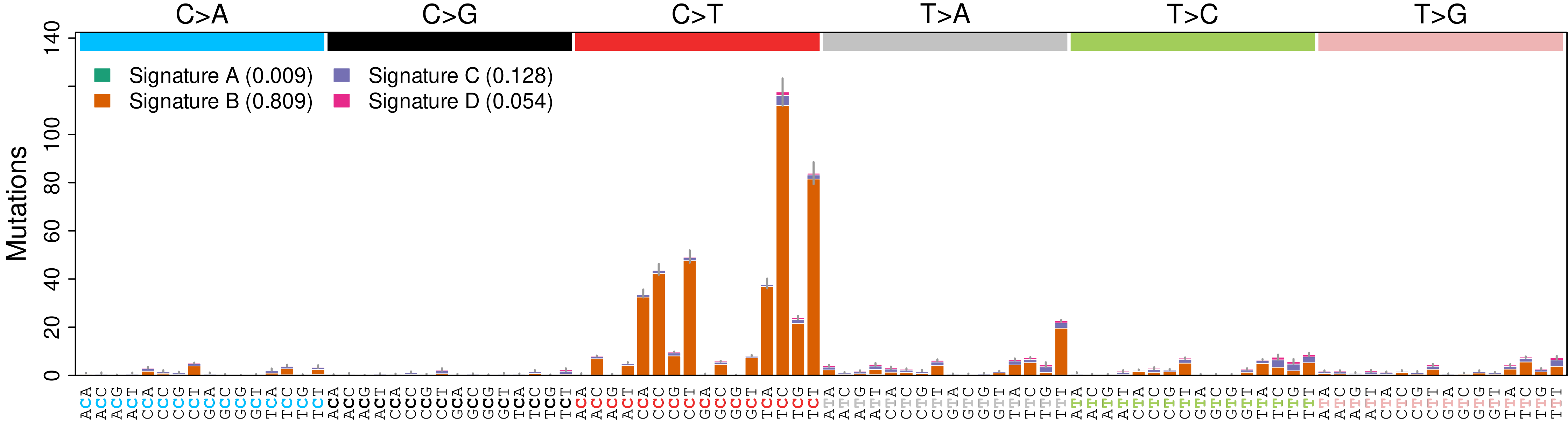




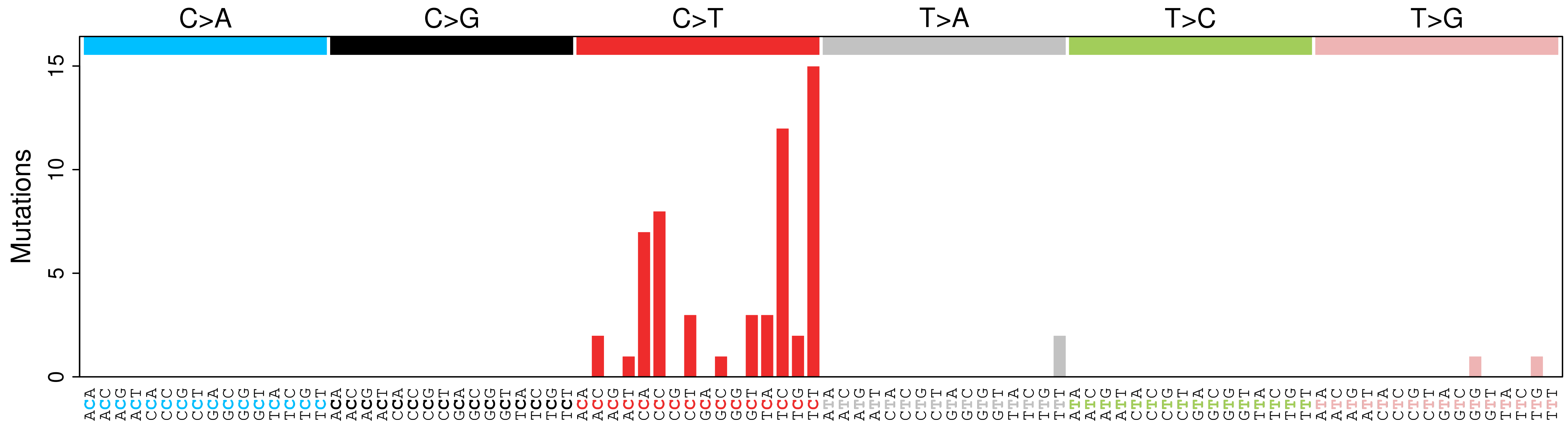
CATD264a (631 mutations)



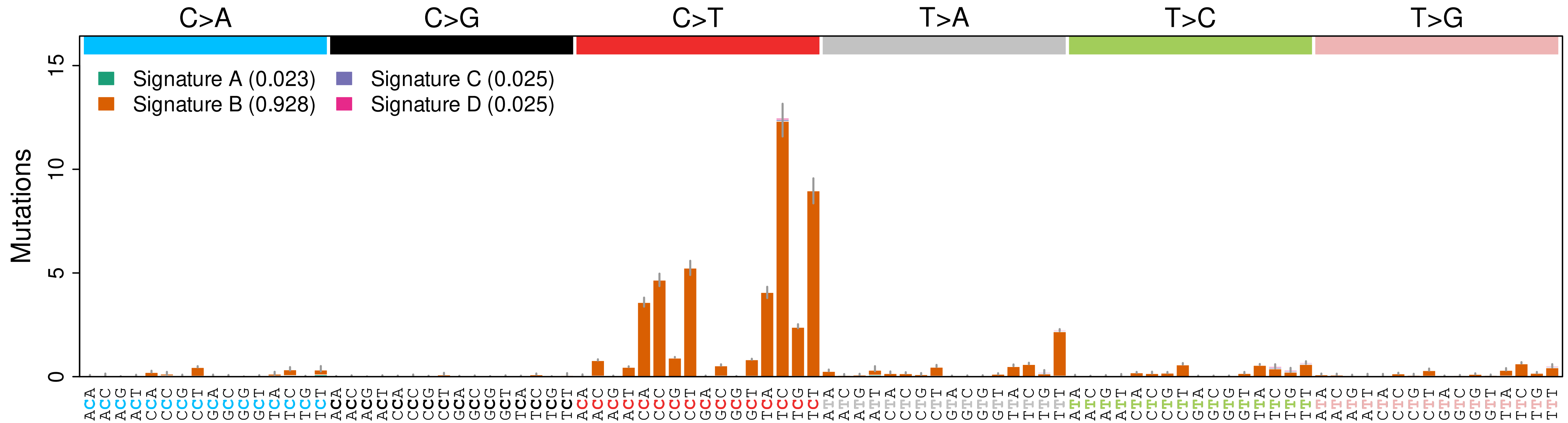
Reconstructed spectrum (cosine similarity = 0.991)



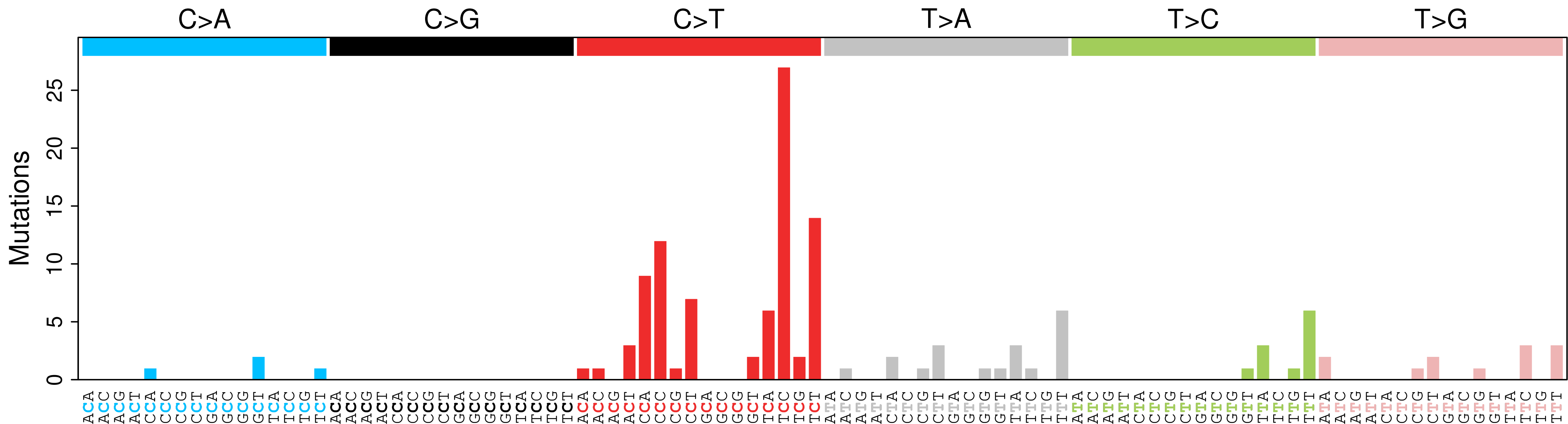
# CATD0135a (61 mutations)



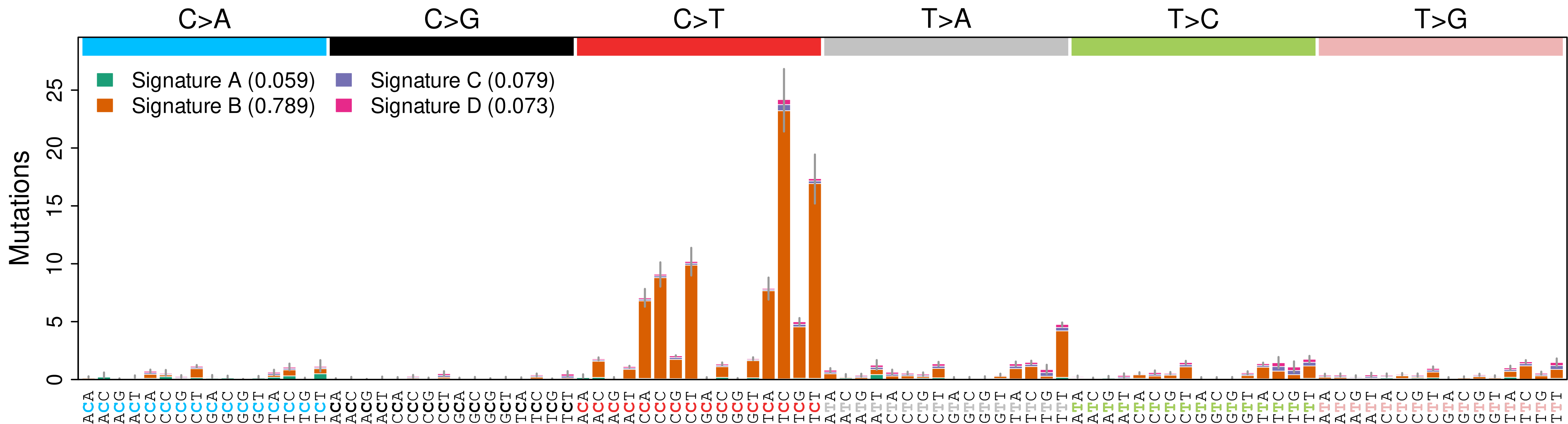
## Reconstructed spectrum (cosine similarity = 0.932)



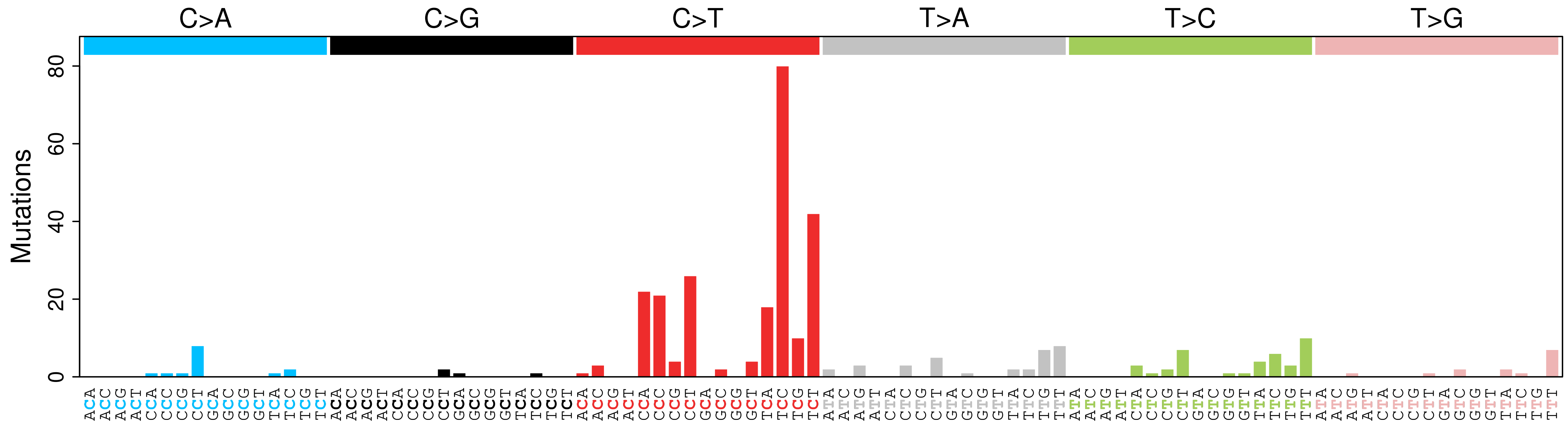
CATD282a (131 mutations)



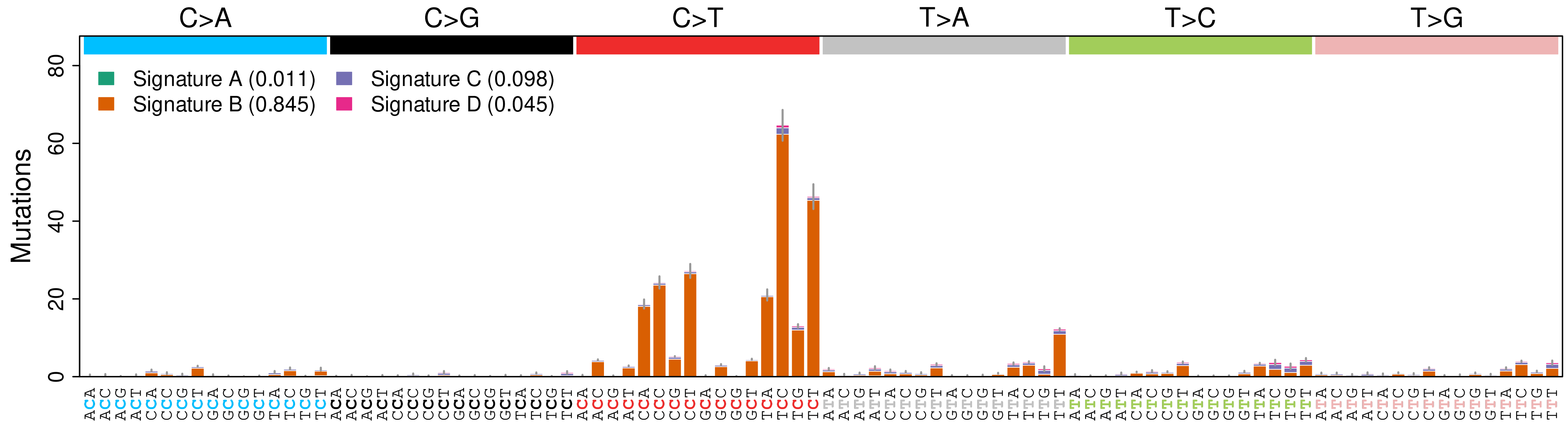
Reconstructed spectrum (cosine similarity = 0.956)



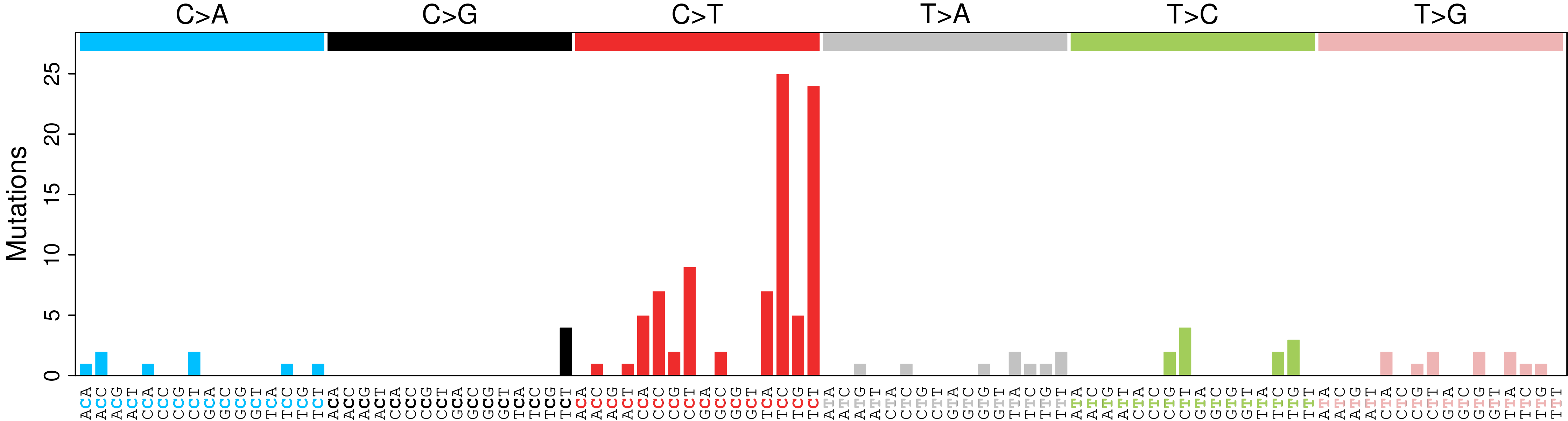
# CATD250a (336 mutations)



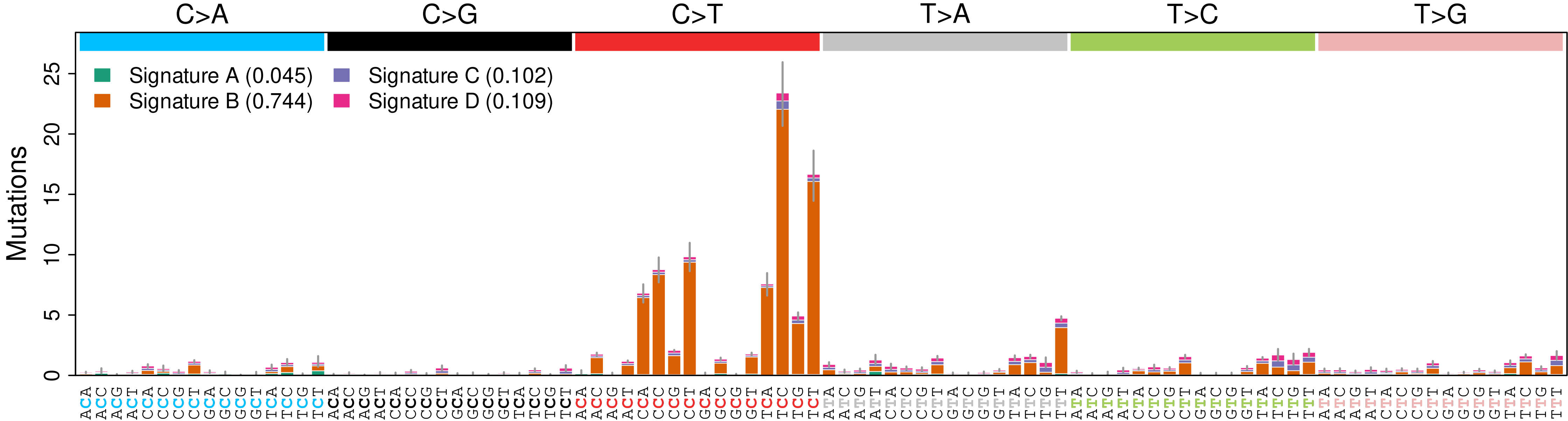
## Reconstructed spectrum (cosine similarity = 0.978)



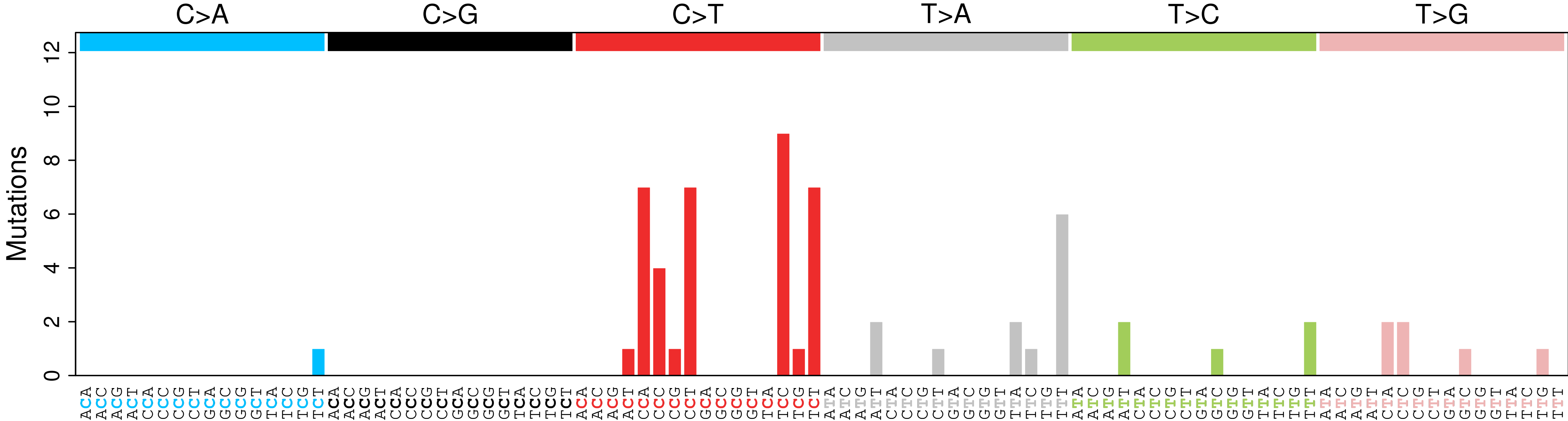
CATD263a (131 mutations)



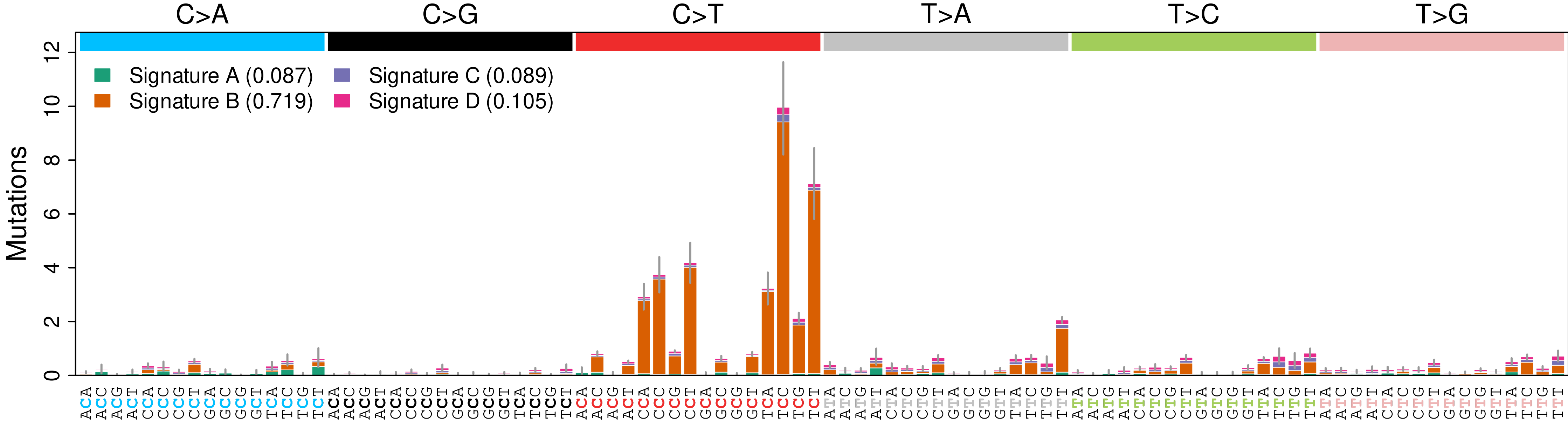
Reconstructed spectrum (cosine similarity = 0.959)



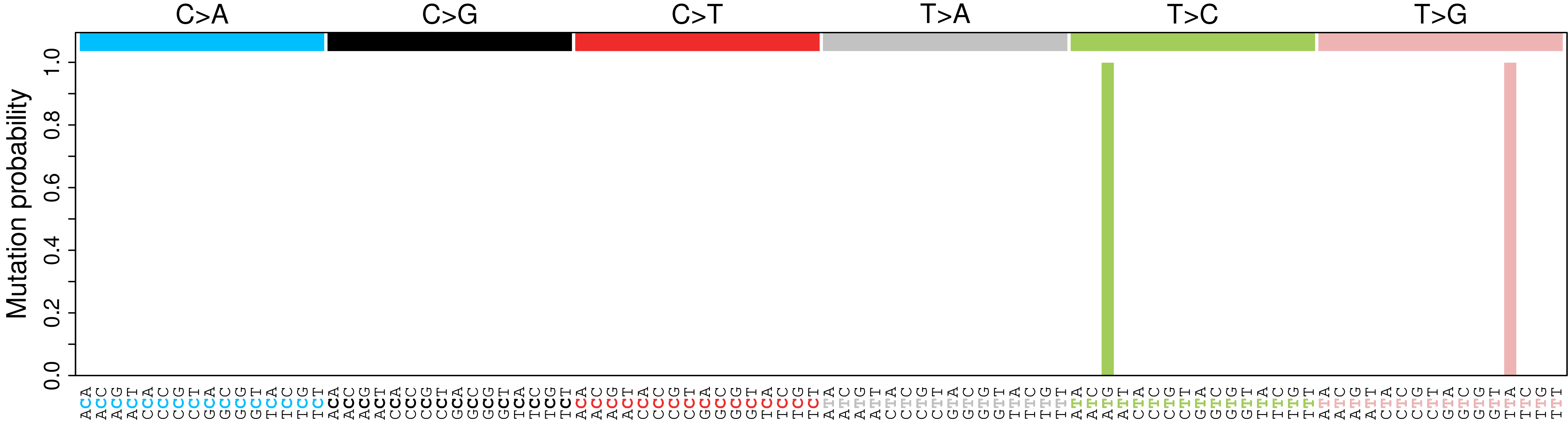
CATD254a (61 mutations)



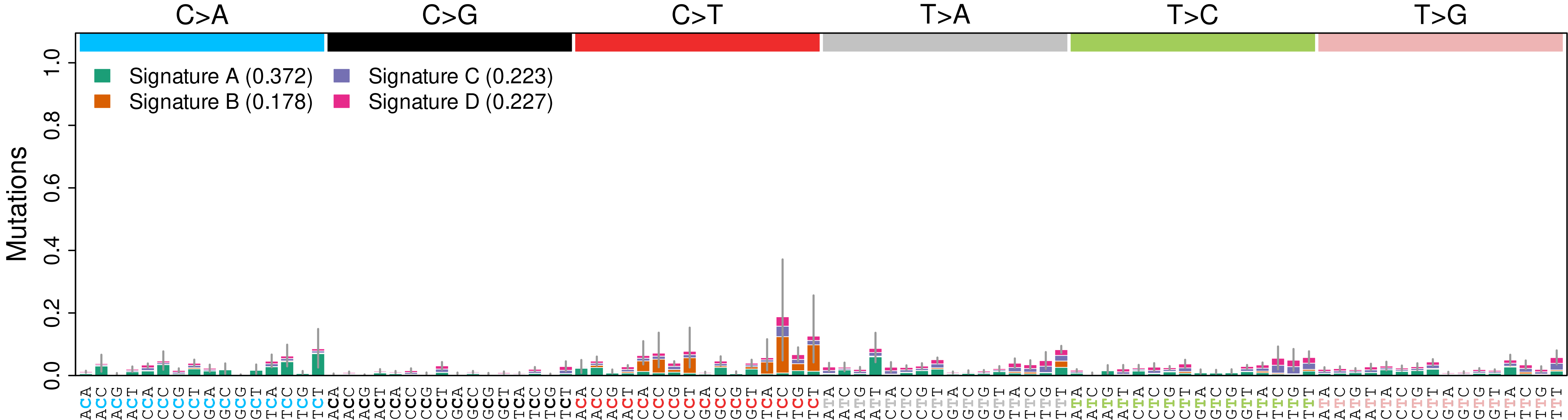
Reconstructed spectrum (cosine similarity = 0.868)



CATD0124a

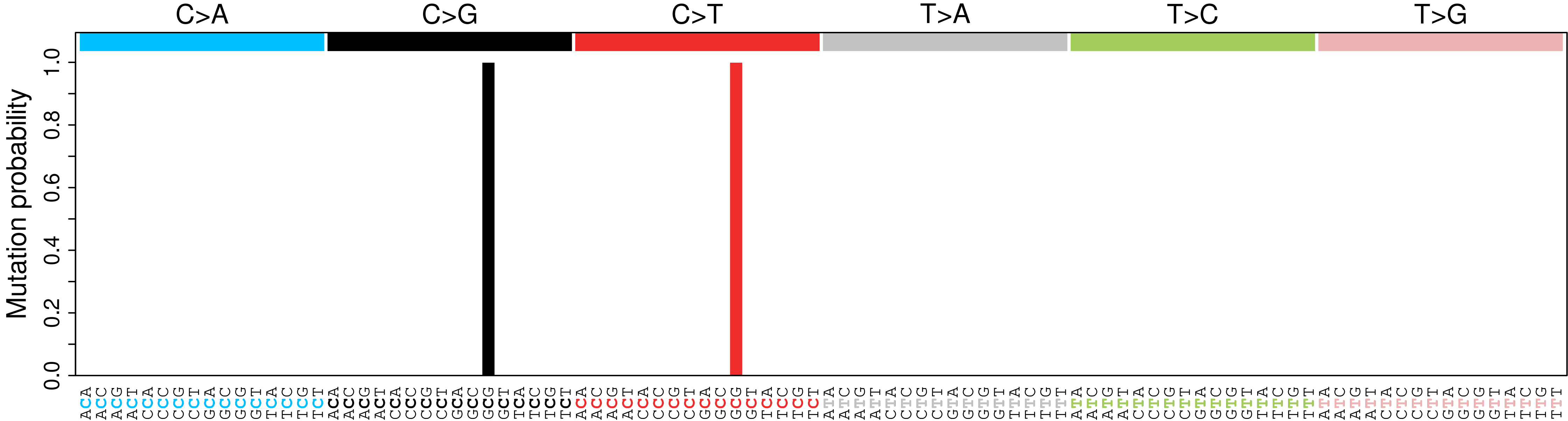


Reconstructed spectrum (cosine similarity = 0.12)

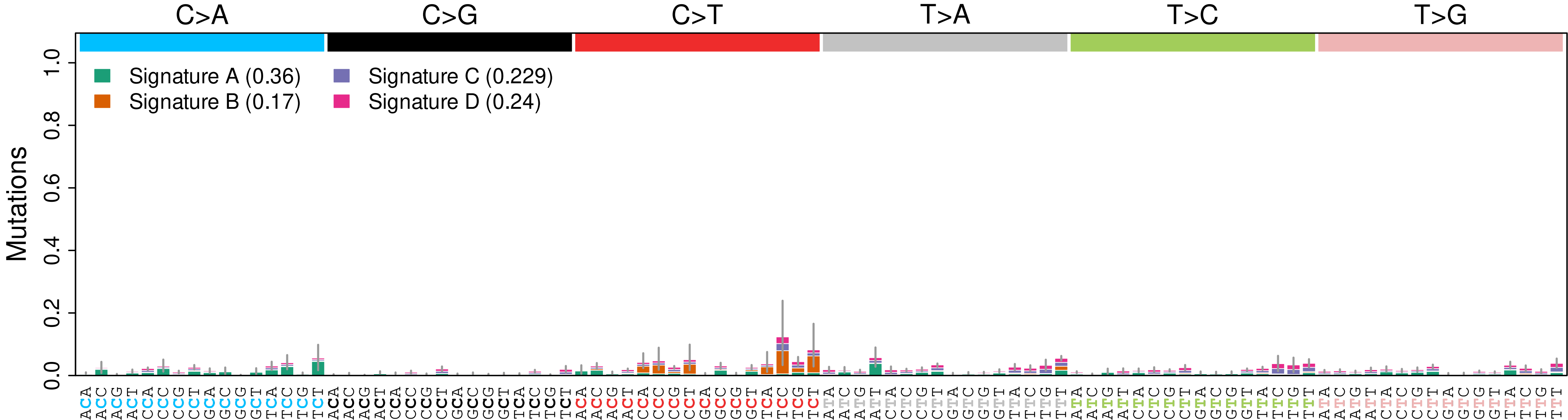




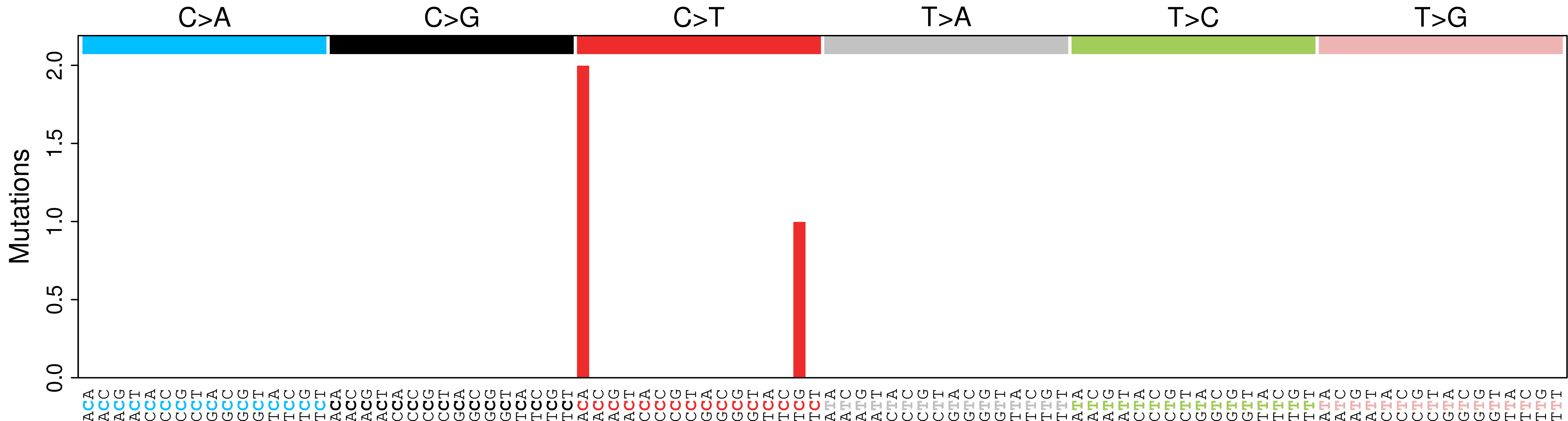
CATD0129a



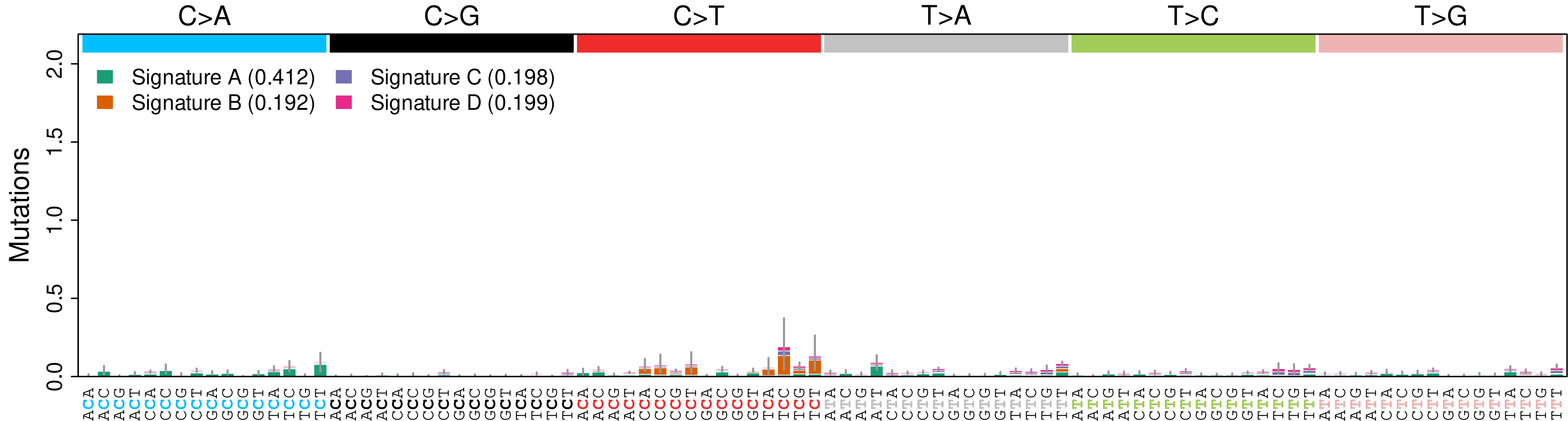
Reconstructed spectrum (cosine similarity = 0.025)



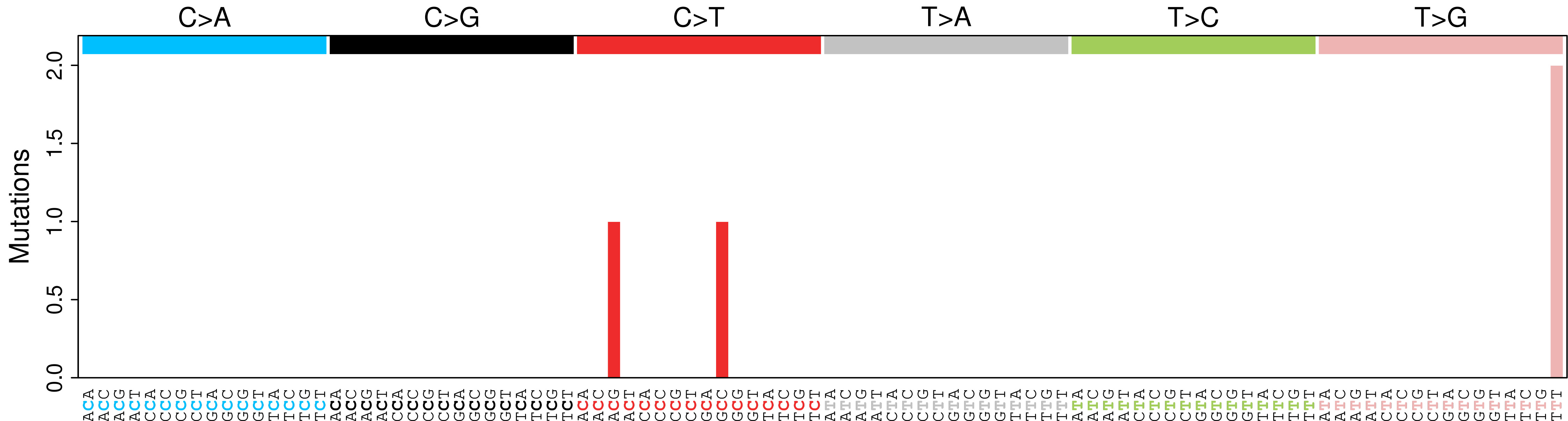
CATD0130a (3 mutations)



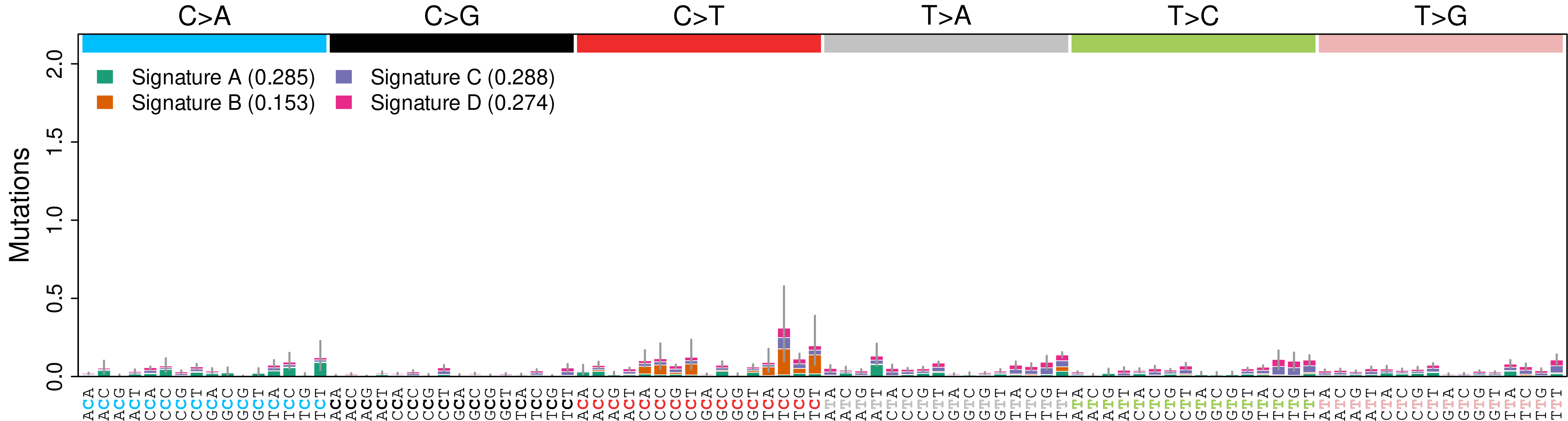
Reconstructed spectrum (cosine similarity = 0.138)



CATD0140a (4 mutations)

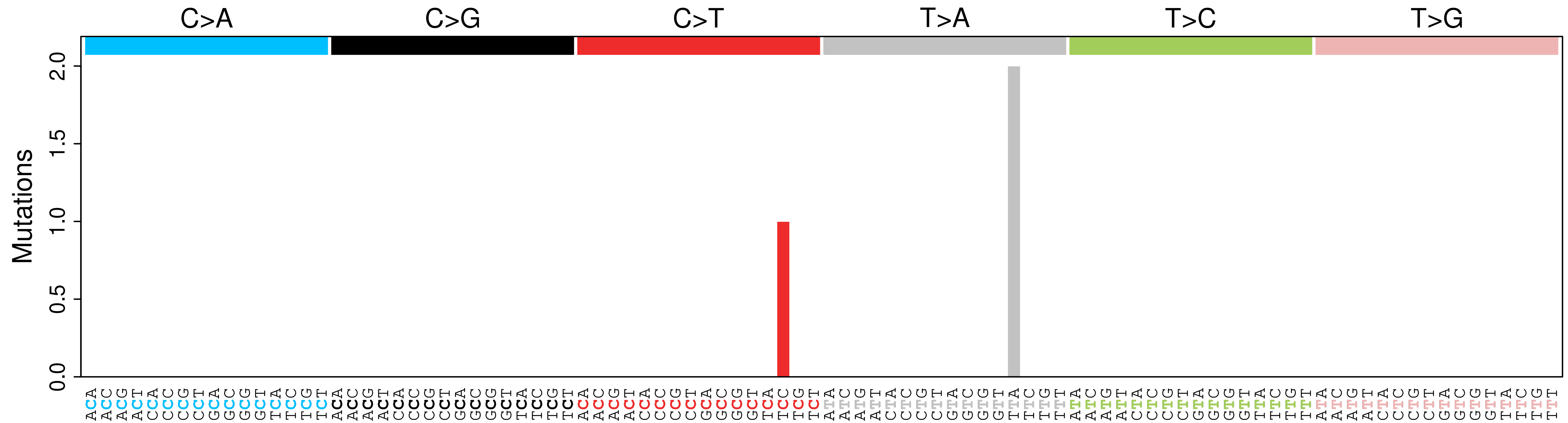


Reconstructed spectrum (cosine similarity = 0.185)

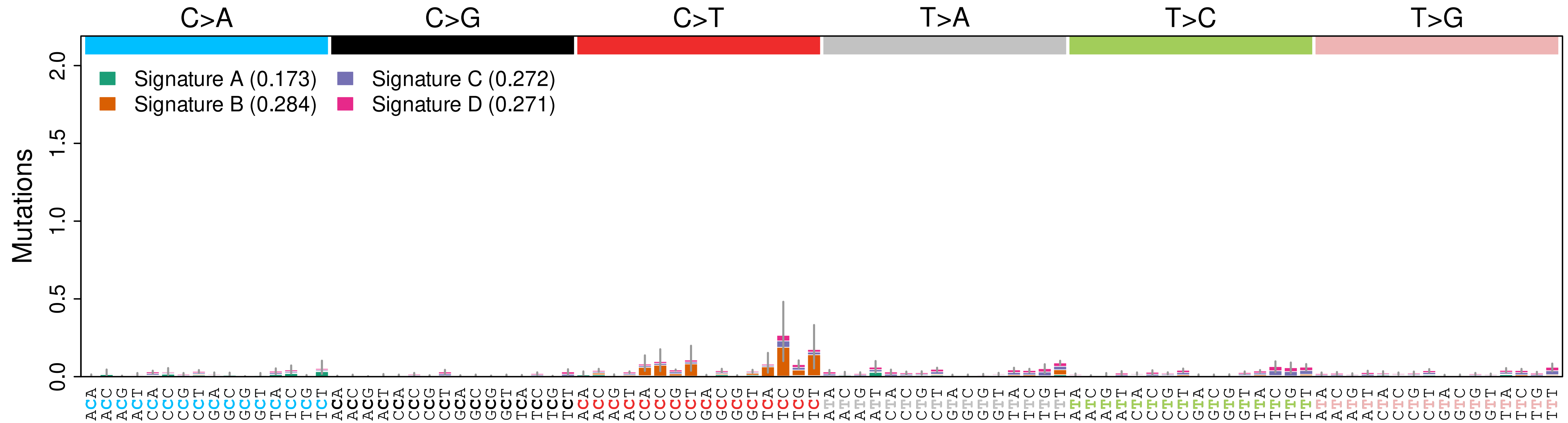




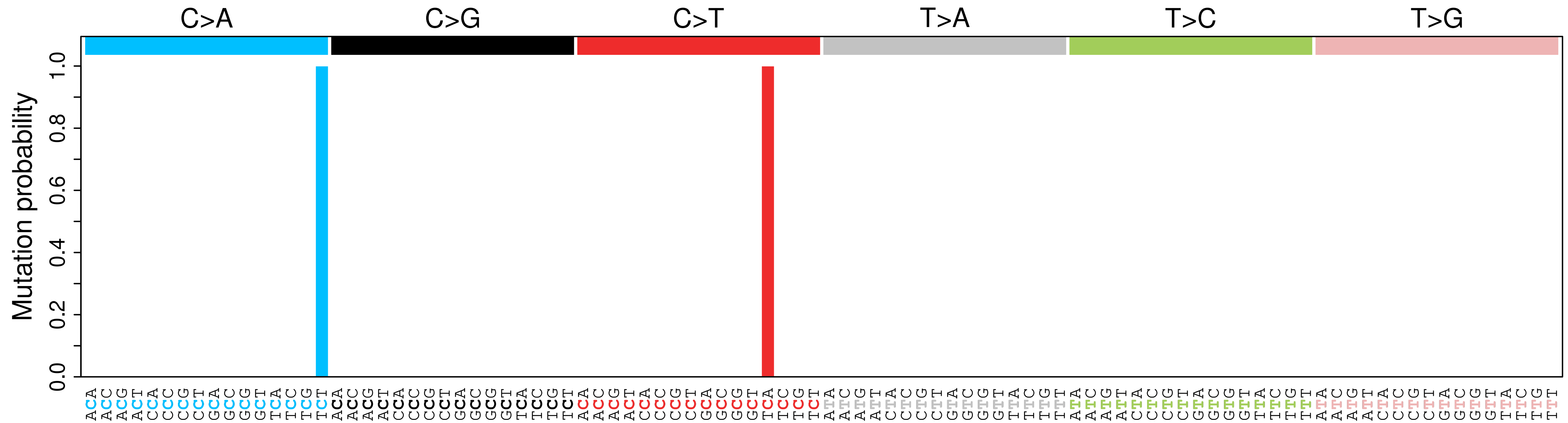
### CATD0125a (3 mutations)



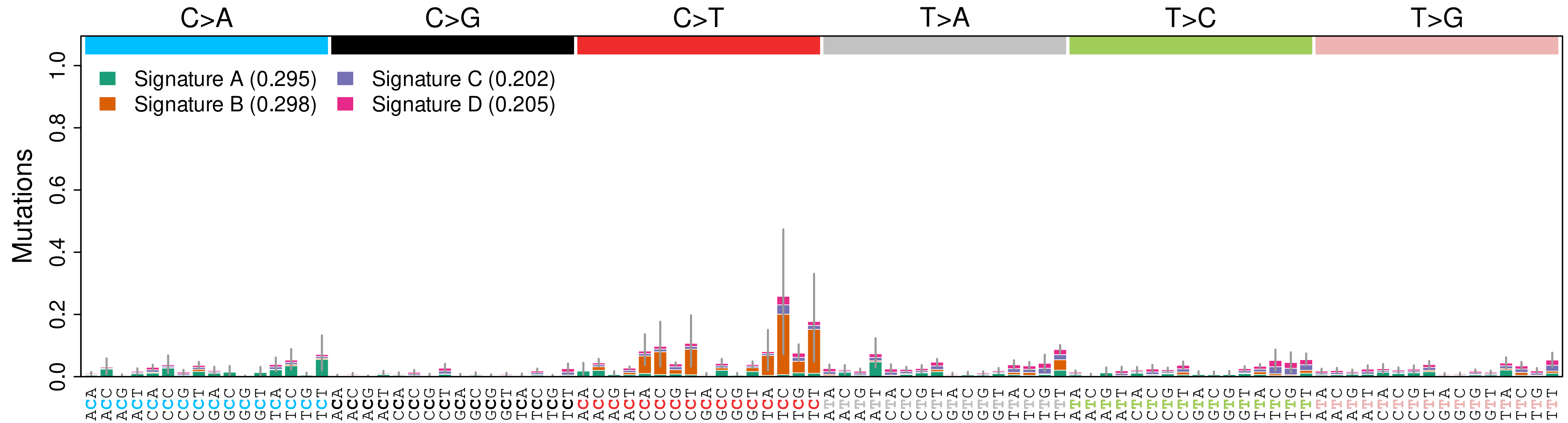
### Reconstructed spectrum (cosine similarity = 0.339)



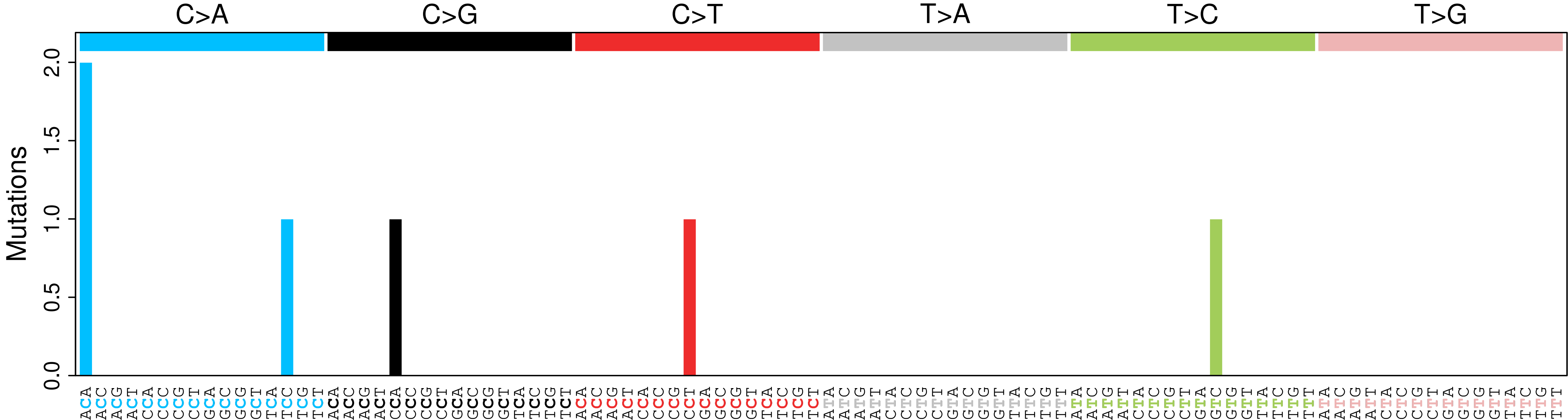
**CATD0134a**



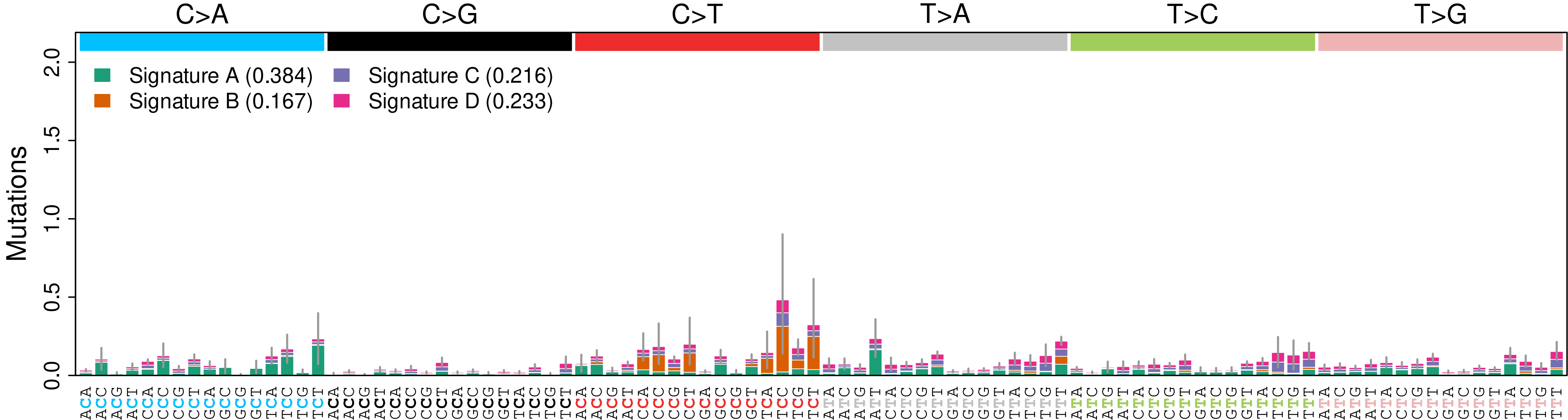
### Reconstructed spectrum (cosine similarity = 0.232)



CATD258a (6 mutations)

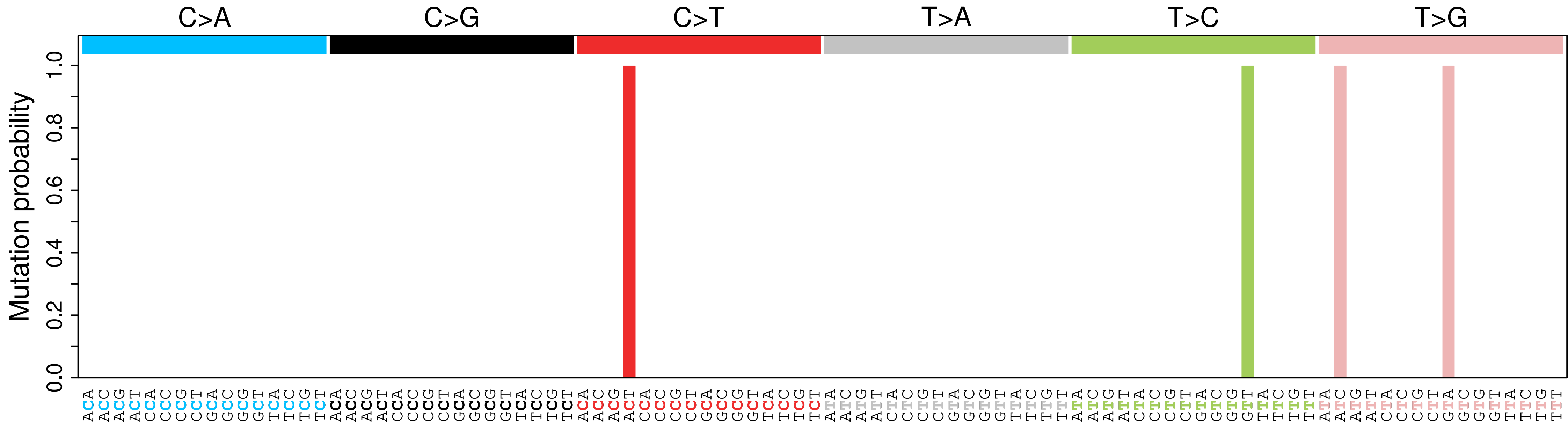


Reconstructed spectrum (cosine similarity = 0.164)

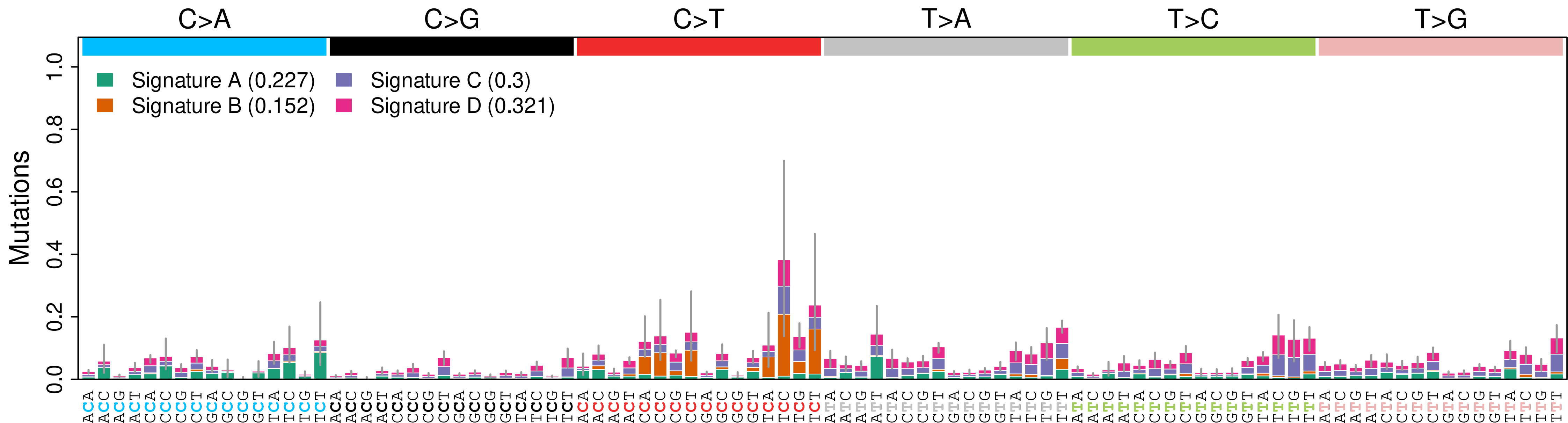




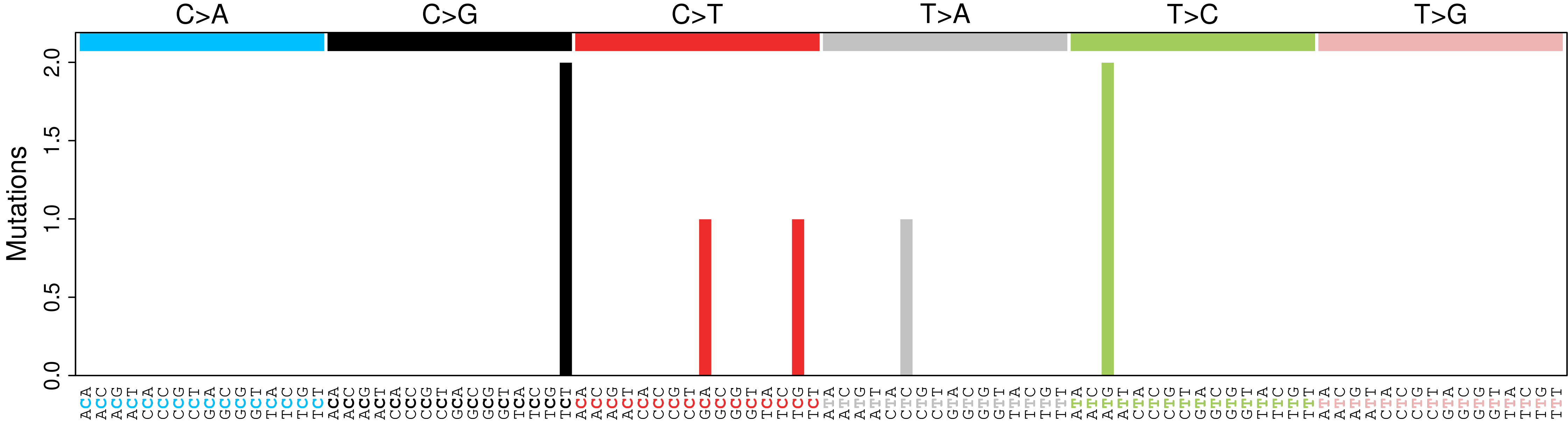
CATD257a



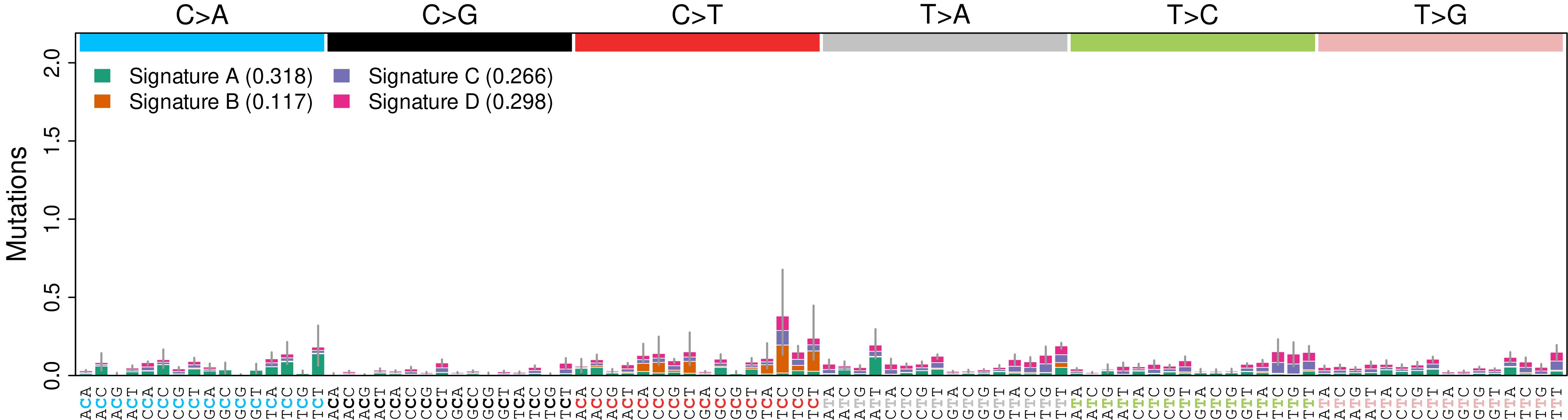
Reconstructed spectrum (cosine similarity = 0.116)



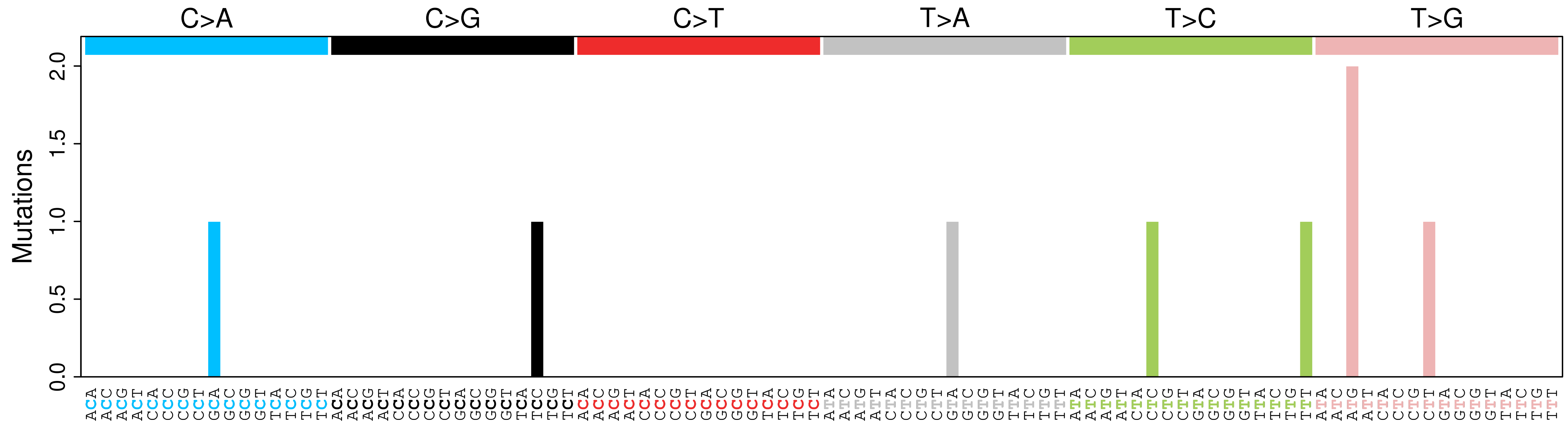
CATD0139a (7 mutations)



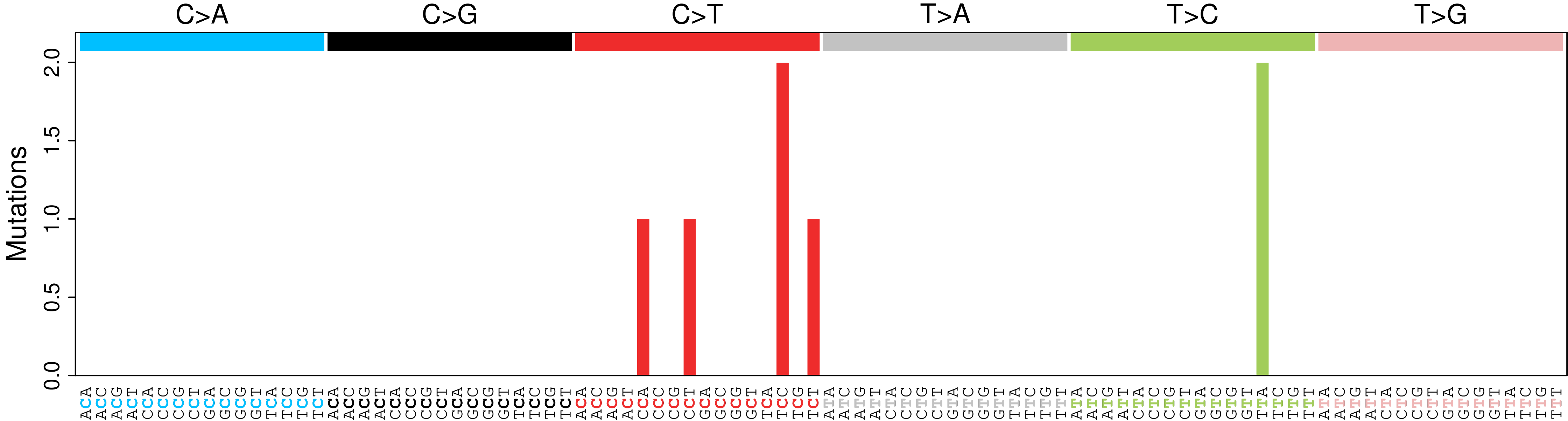
Reconstructed spectrum (cosine similarity = 0.16)



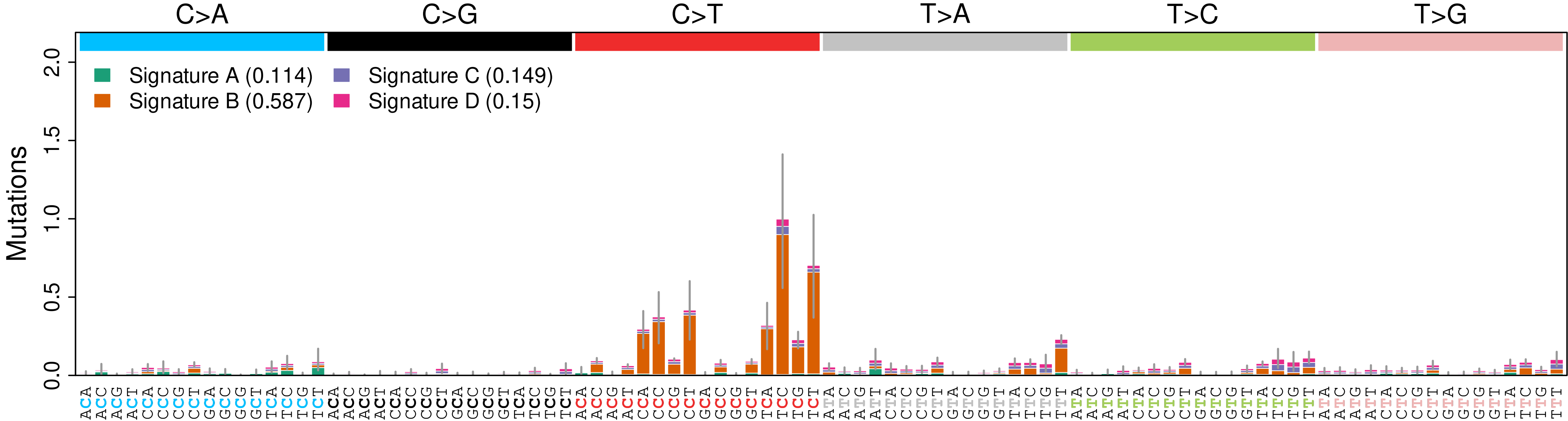
### CATD0137a (8 mutations)



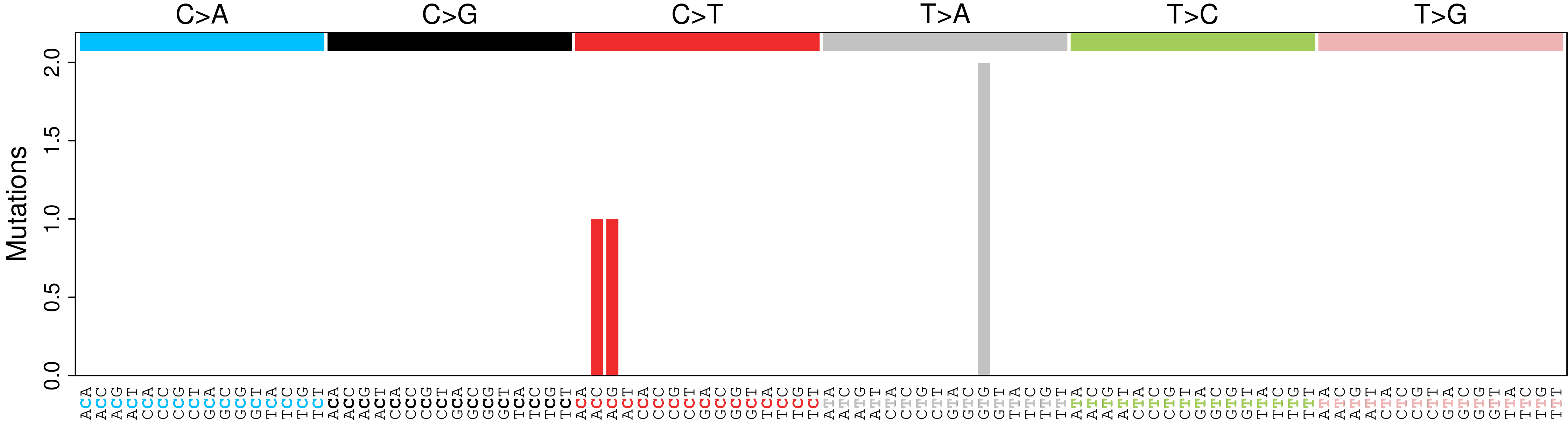
CATD249a (7 mutations)



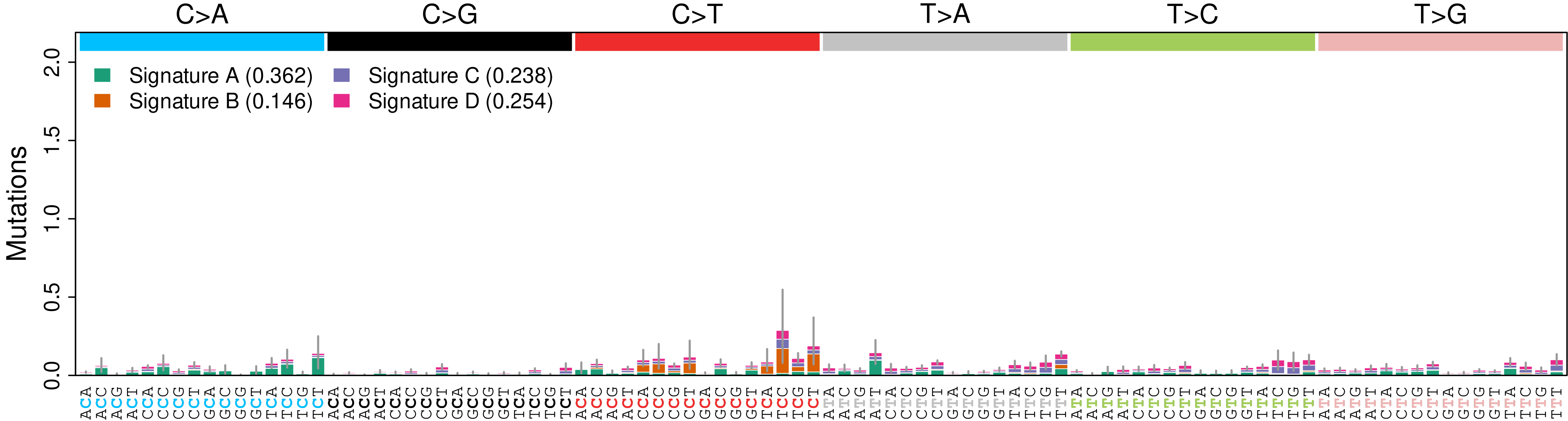
Reconstructed spectrum (cosine similarity = 0.707)



CATD271a (4 mutations)

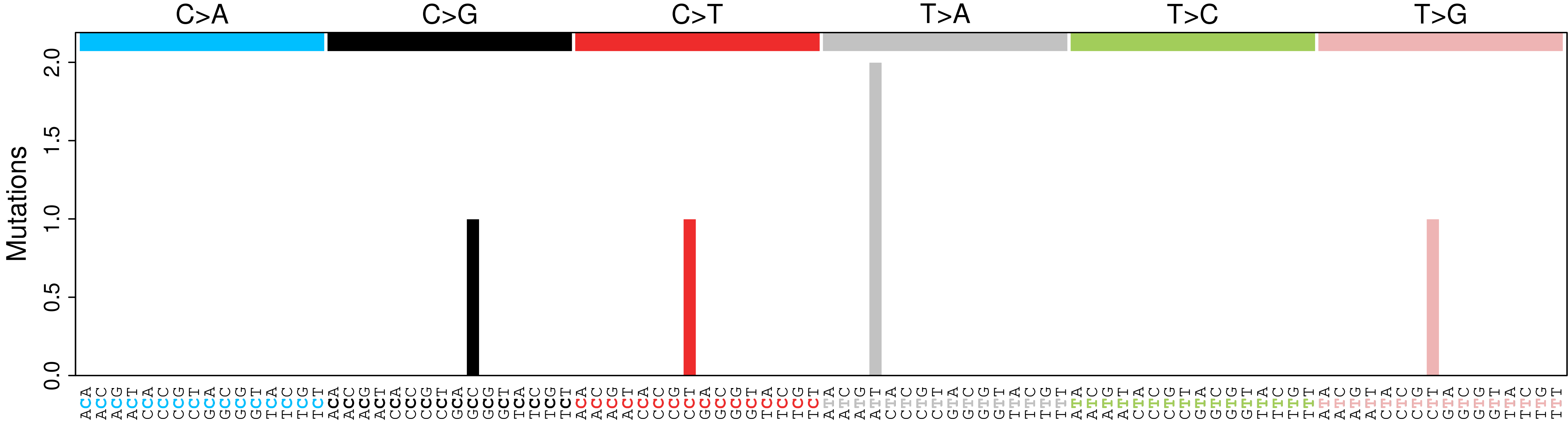


Reconstructed spectrum (cosine similarity = 0.091)

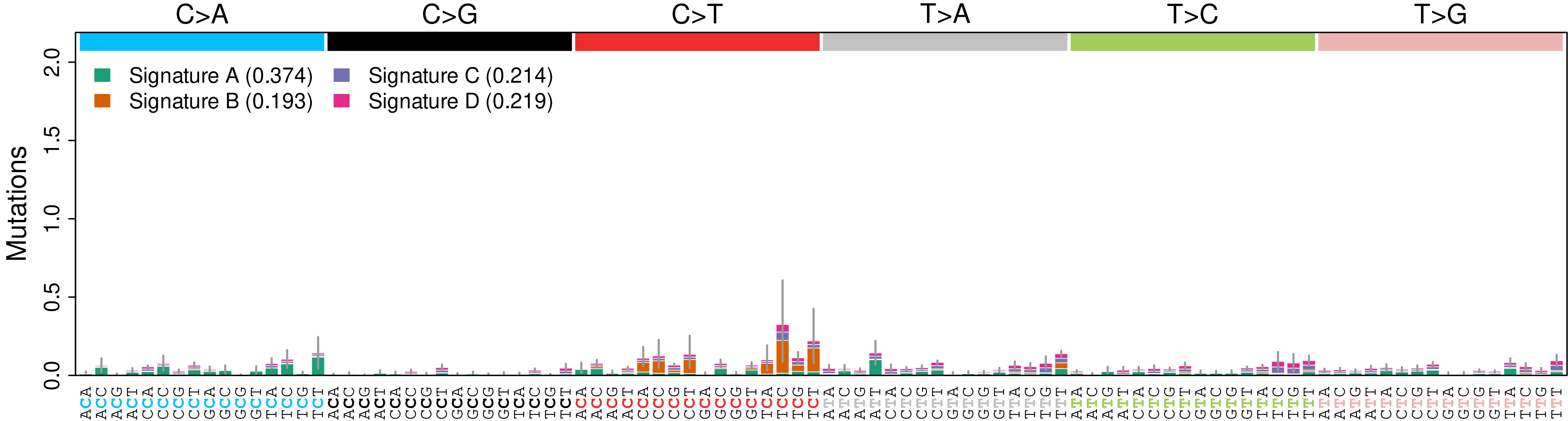




CATD0127a (5 mutations)

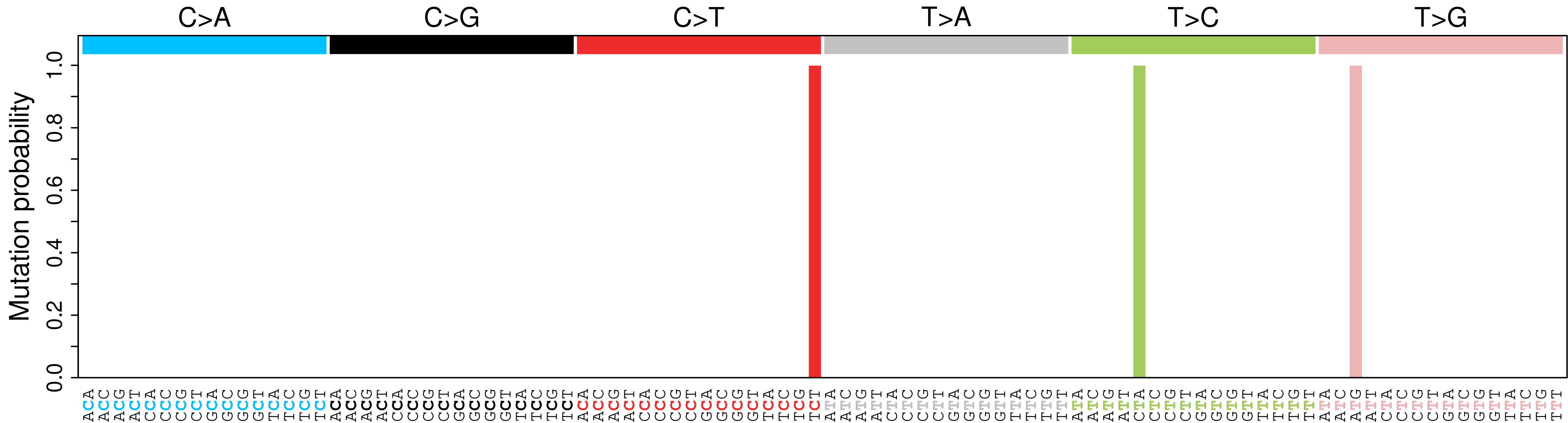


Reconstructed spectrum (cosine similarity = 0.282)

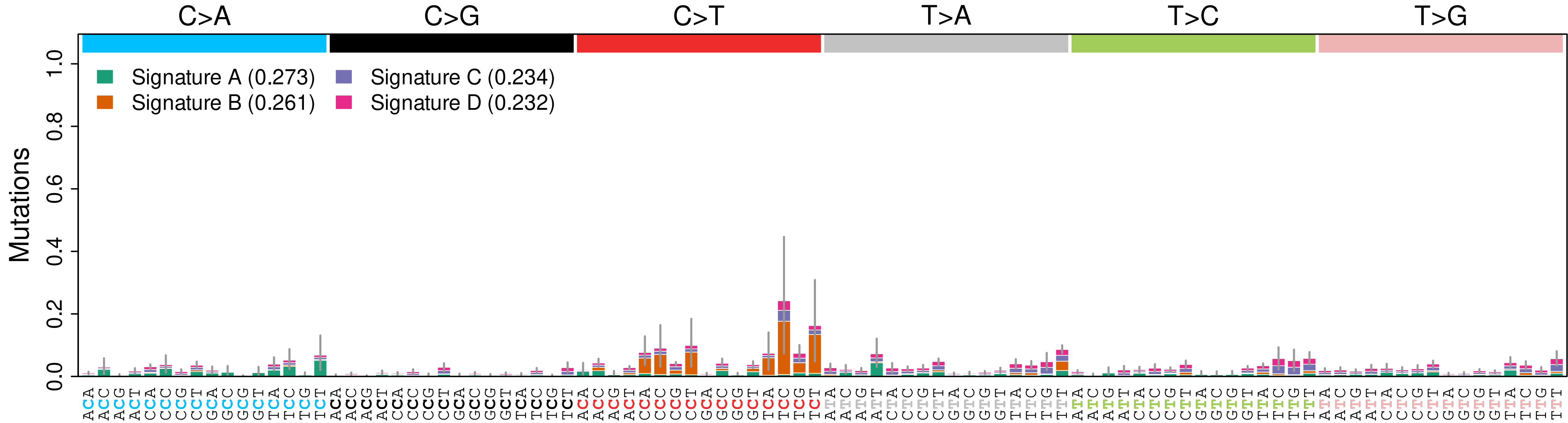




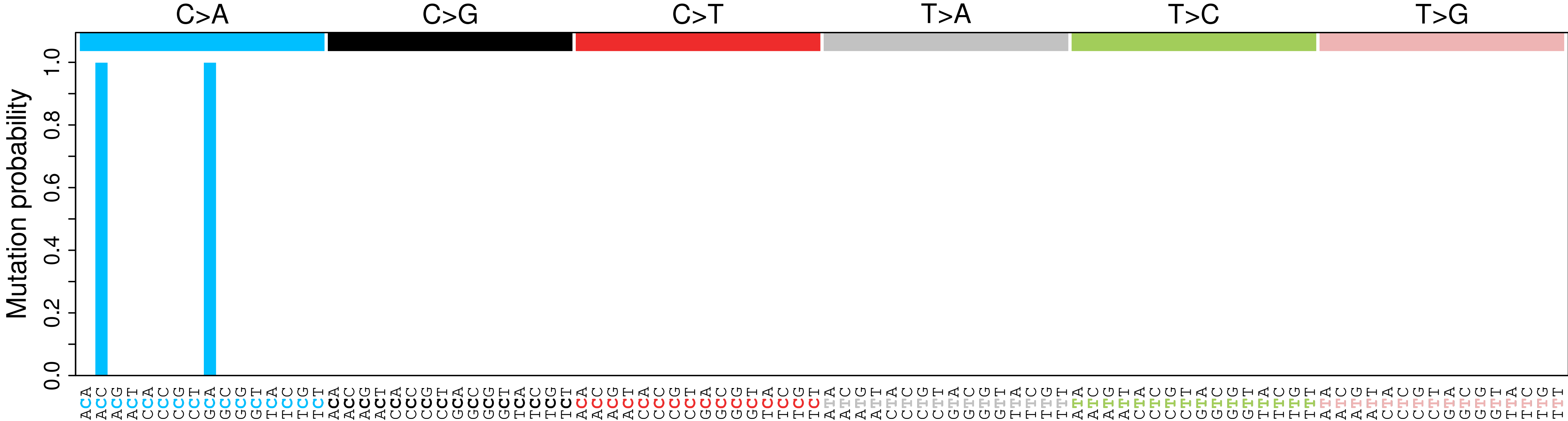
CATD277a



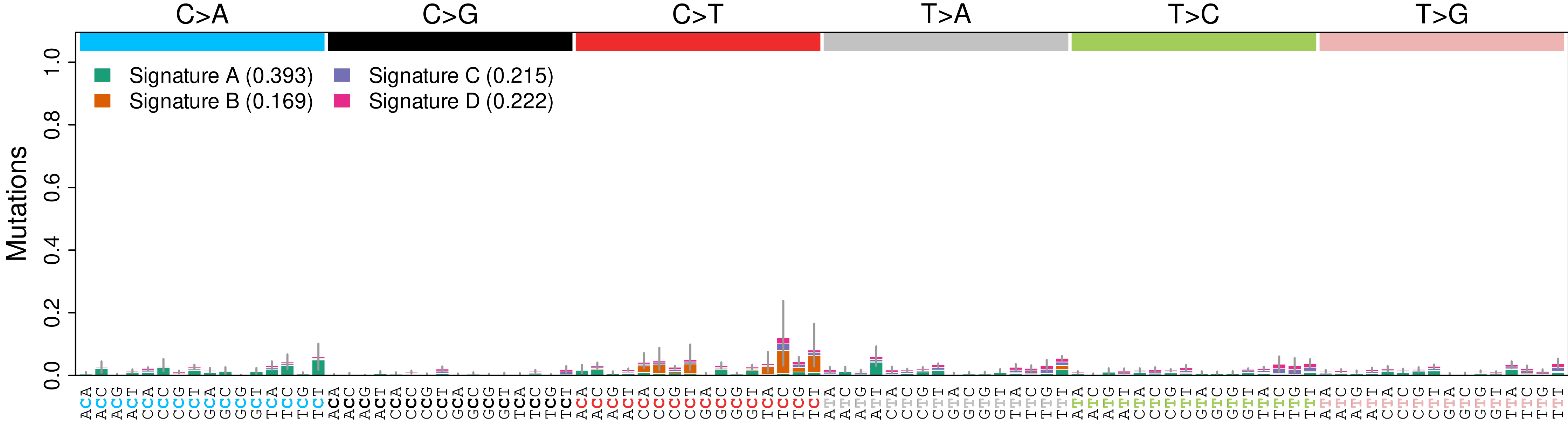
Reconstructed spectrum (cosine similarity = 0.26)



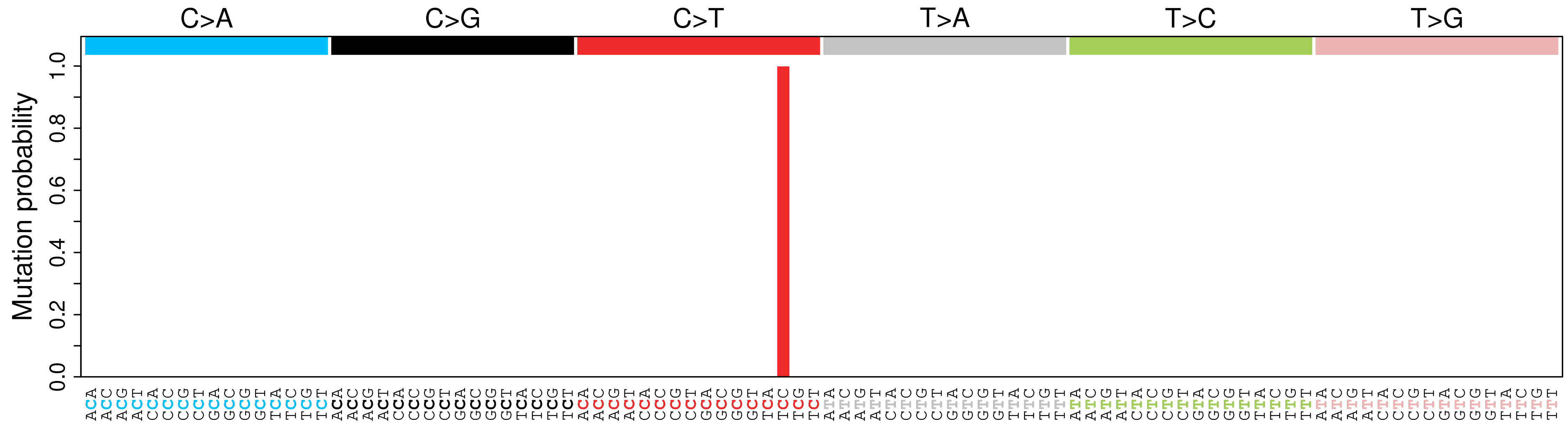
CATD281a



Reconstructed spectrum (cosine similarity = 0.111)



**CATD0133a**



### Reconstructed spectrum (cosine similarity = 0.59)

