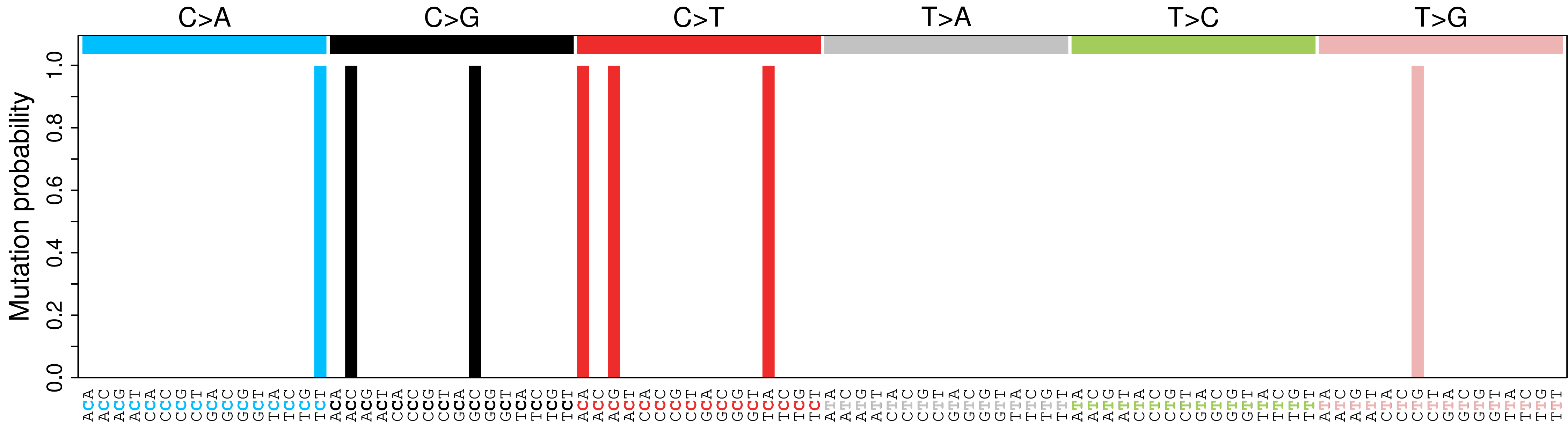
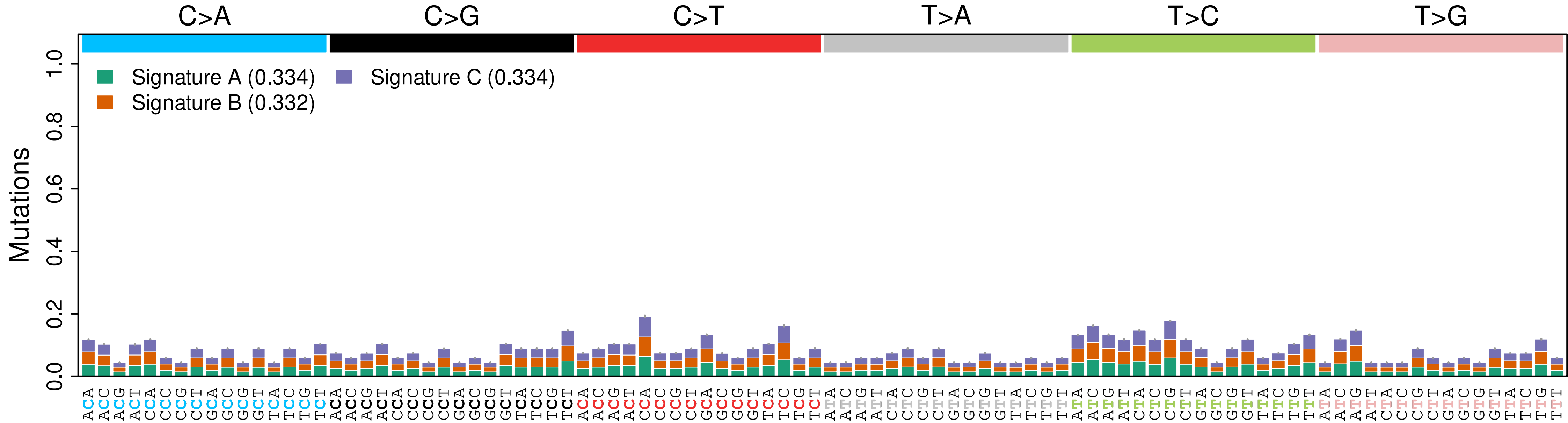


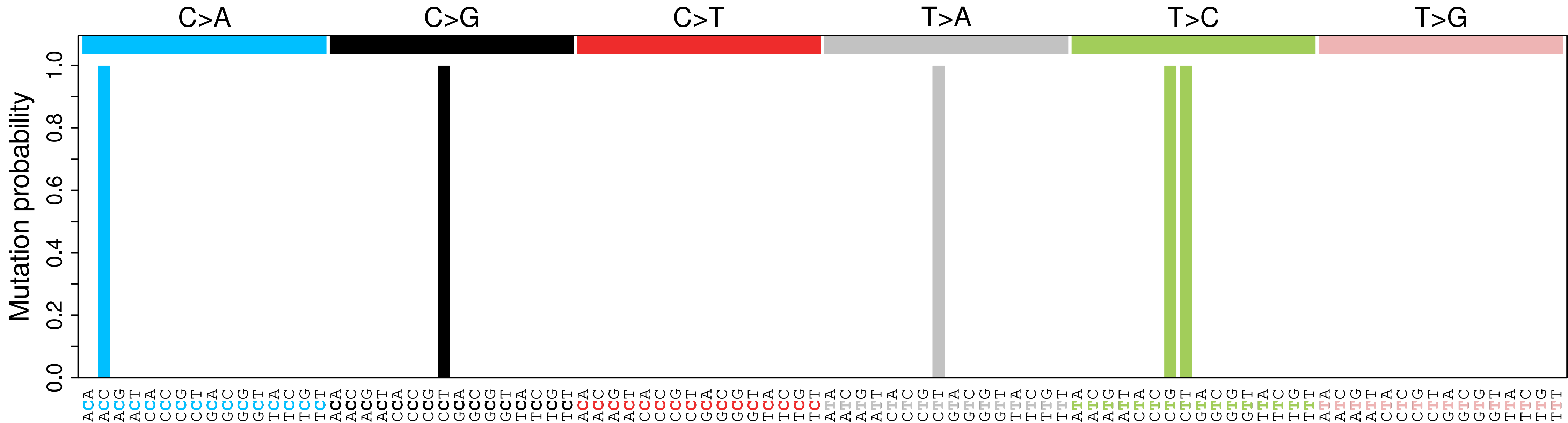
CATD0414a



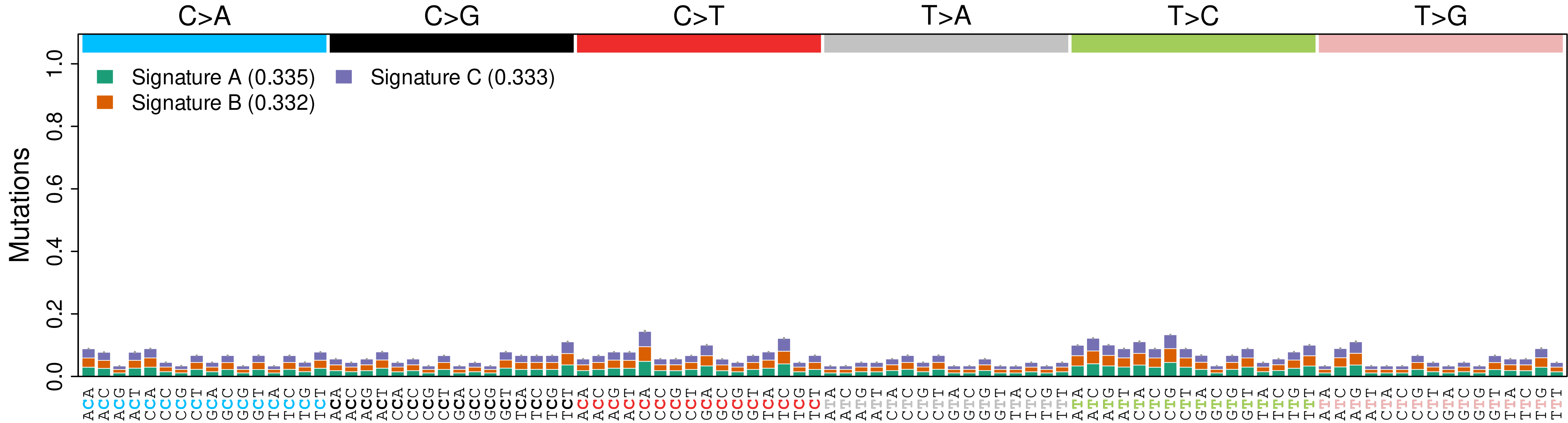
Reconstructed spectrum (cosine similarity = 0.255)



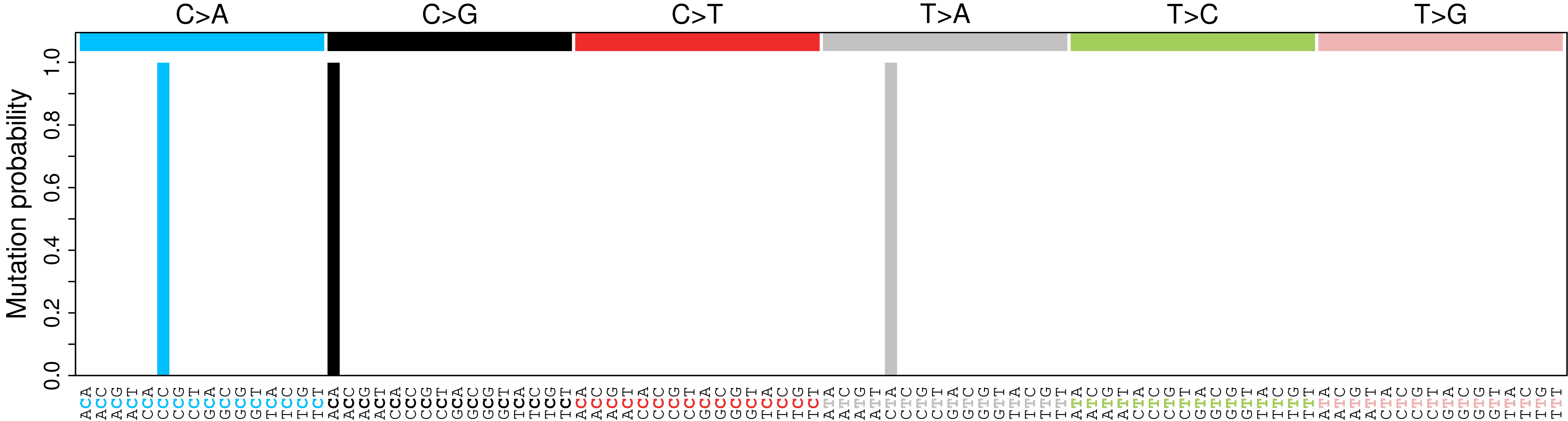
CATD0105a



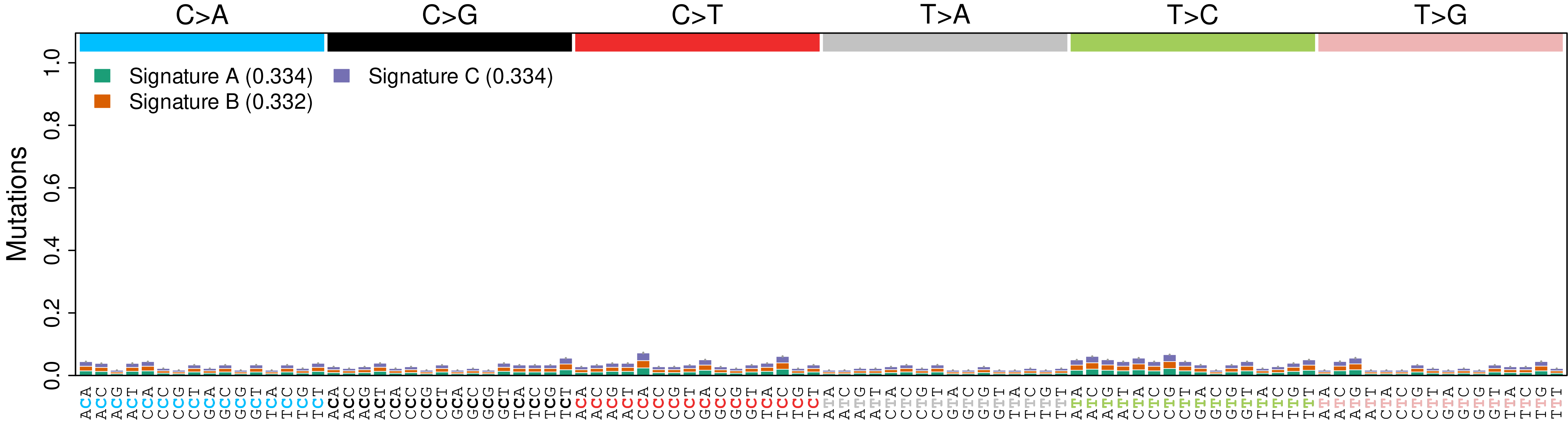
Reconstructed spectrum (cosine similarity = 0.293)



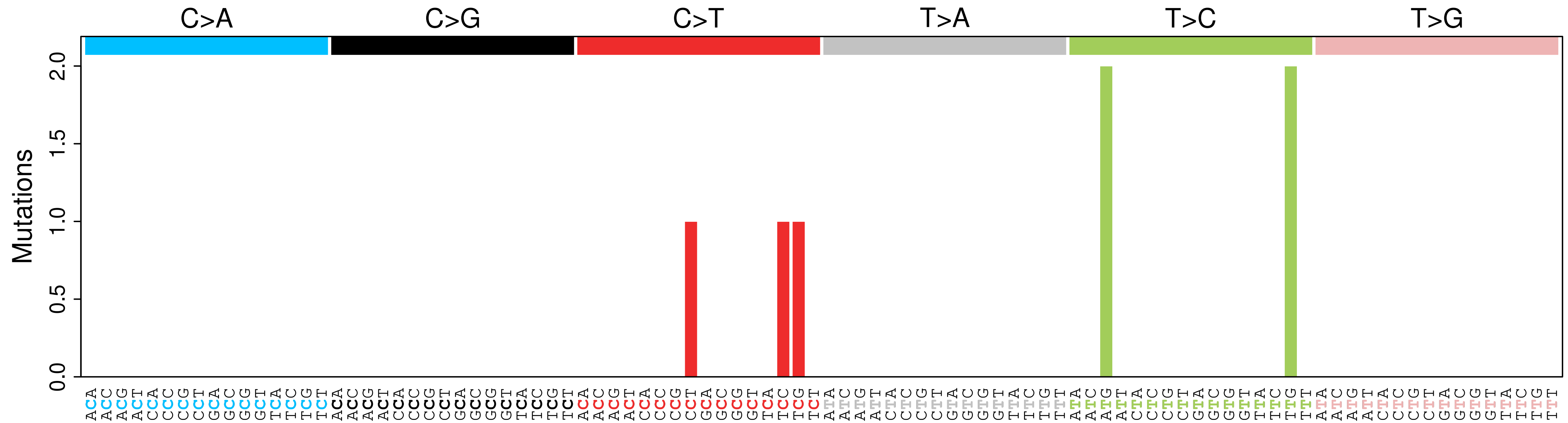
CATD189a



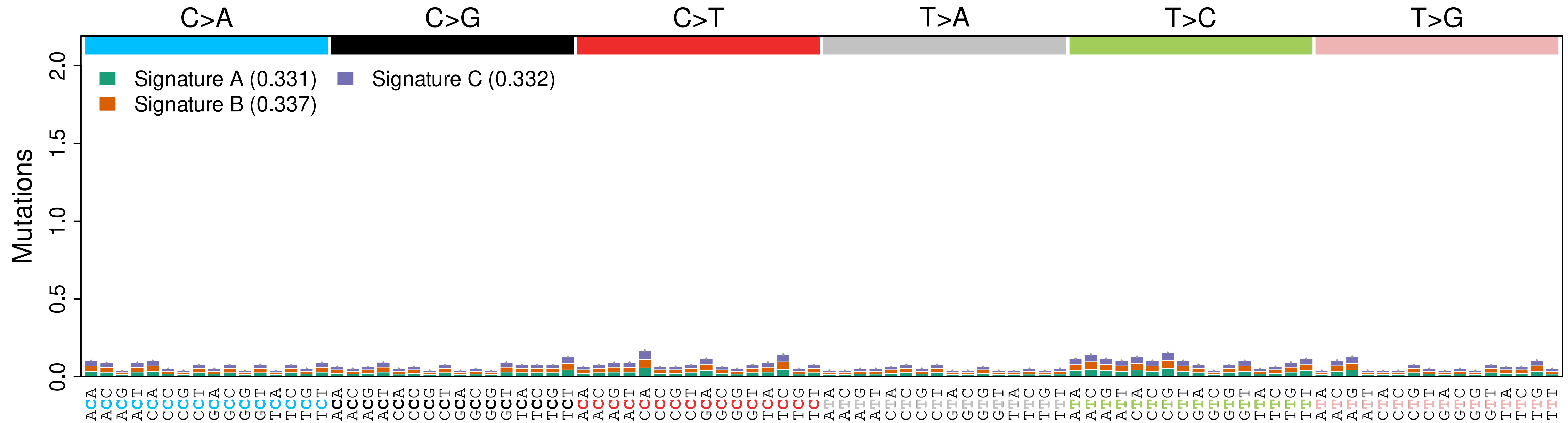
Reconstructed spectrum (cosine similarity = 0.136)



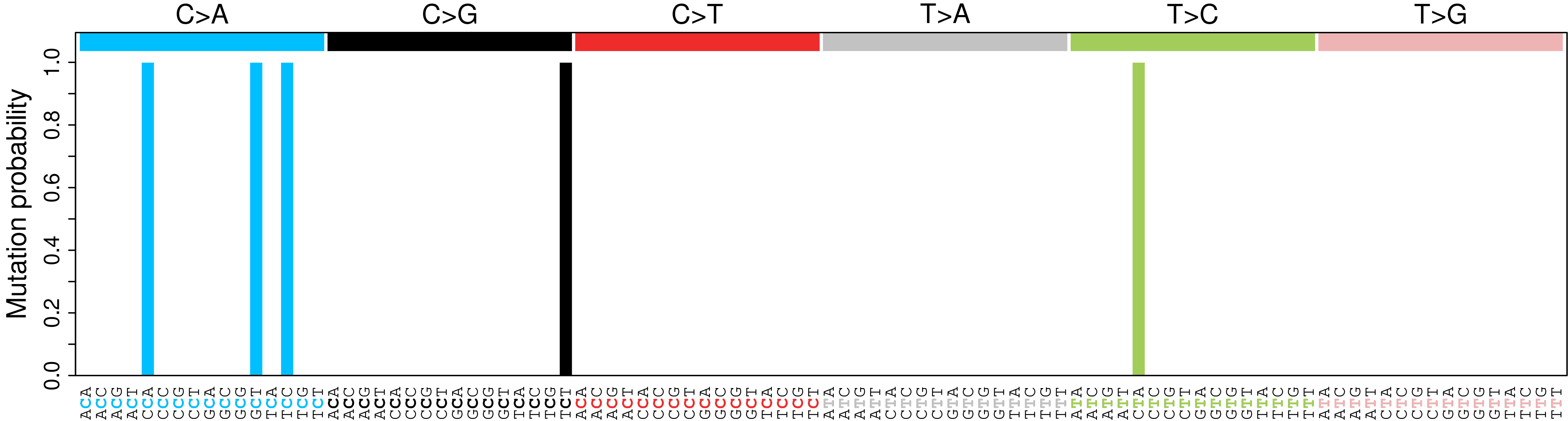
### CATD0090a (7 mutations)



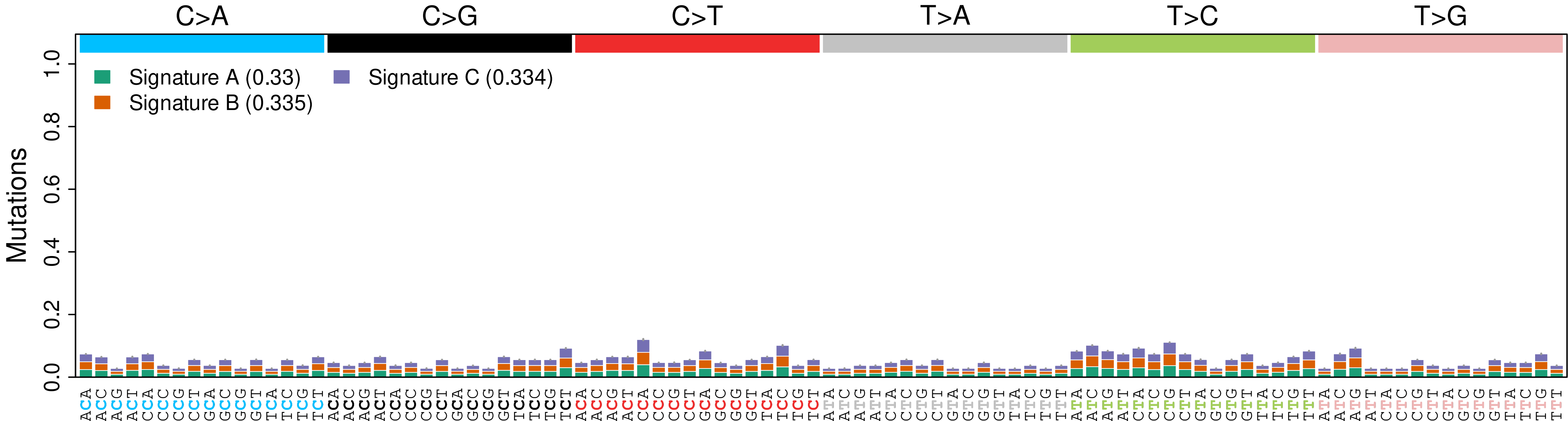
### Reconstructed spectrum (cosine similarity = 0.269)



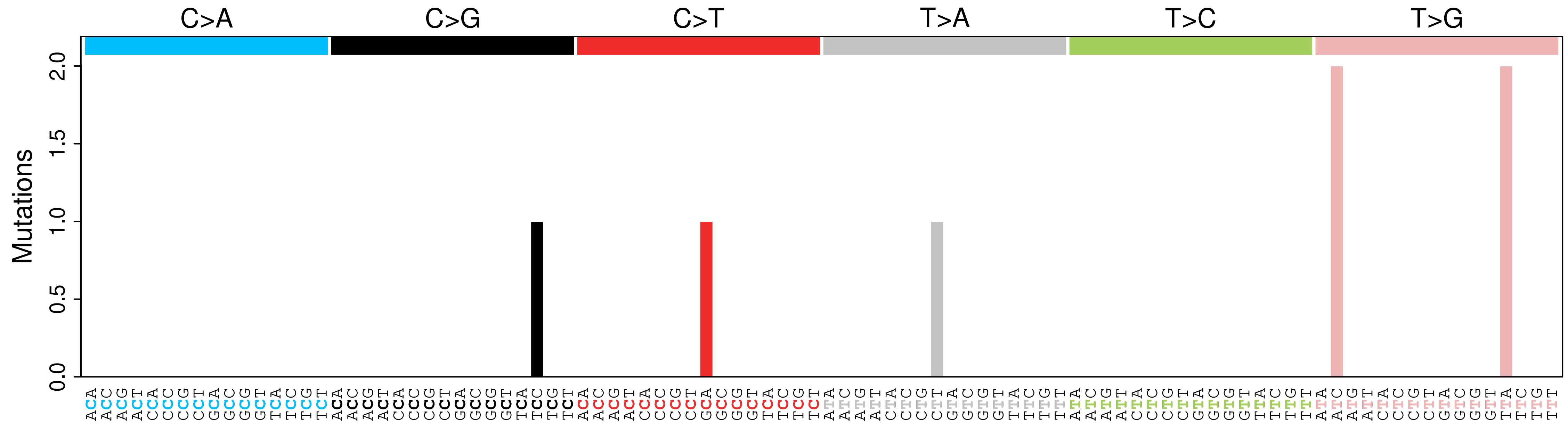
CATD0088a



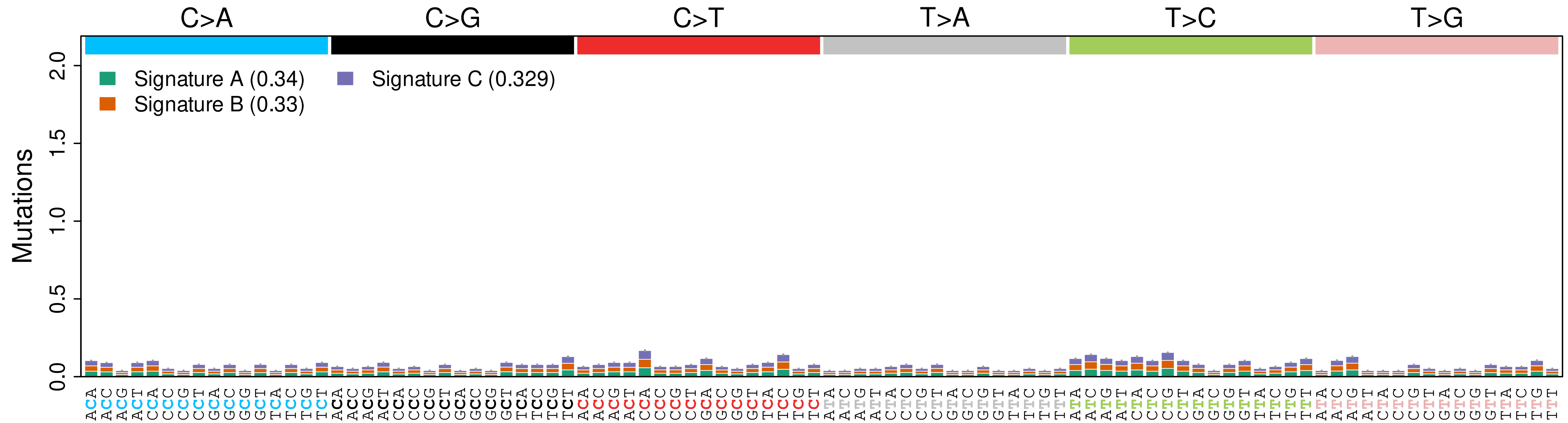
Reconstructed spectrum (cosine similarity = 0.3)



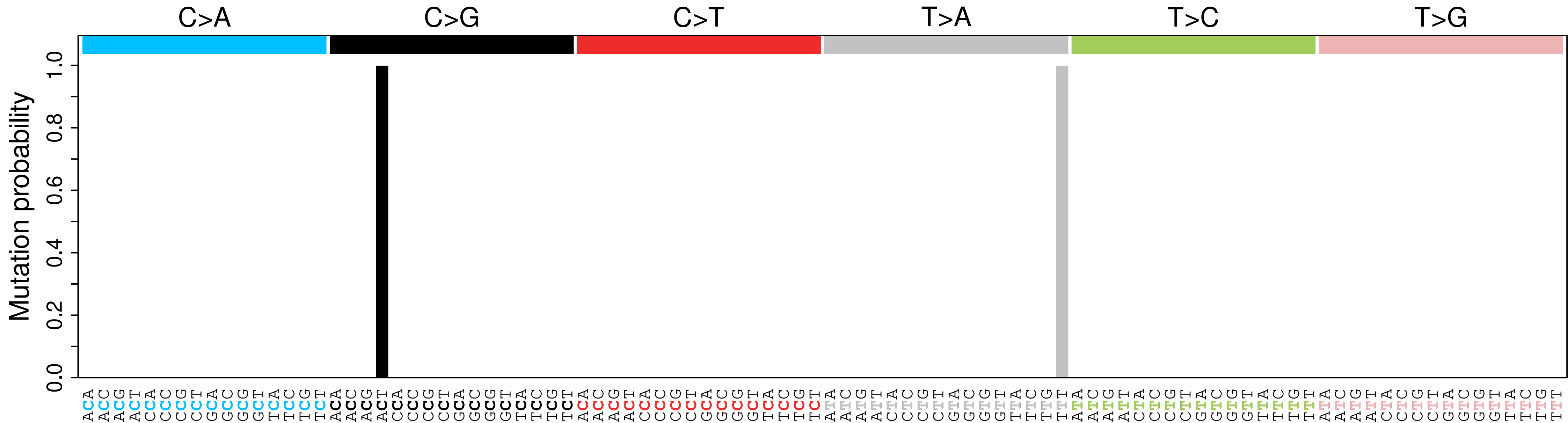
### CATD0102a (7 mutations)



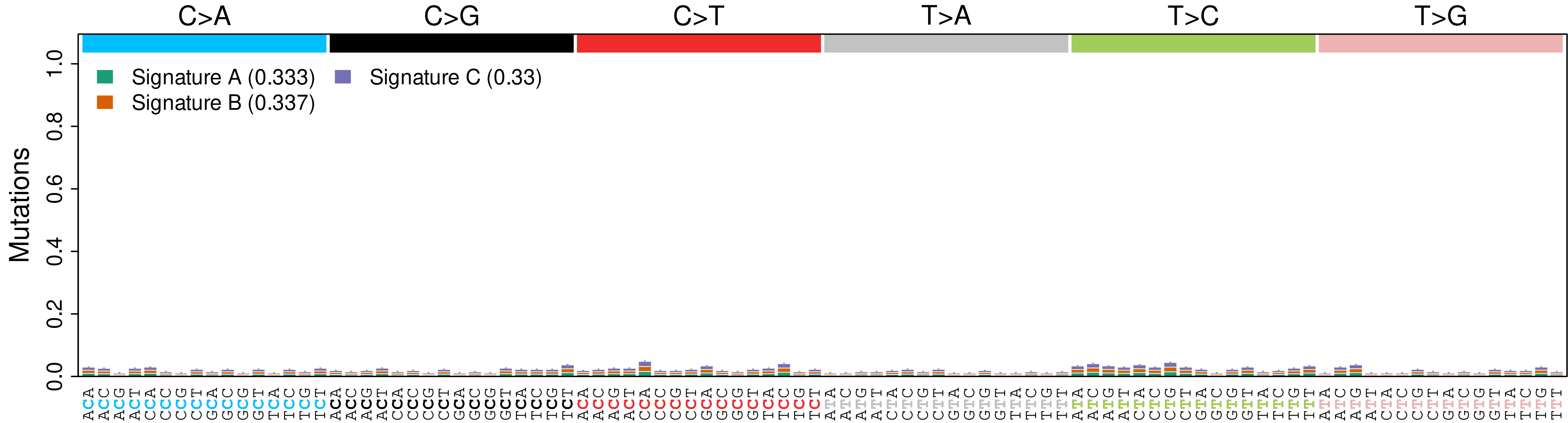
### Reconstructed spectrum (cosine similarity = 0.239)



CATD0400a



Reconstructed spectrum (cosine similarity = 0.132)

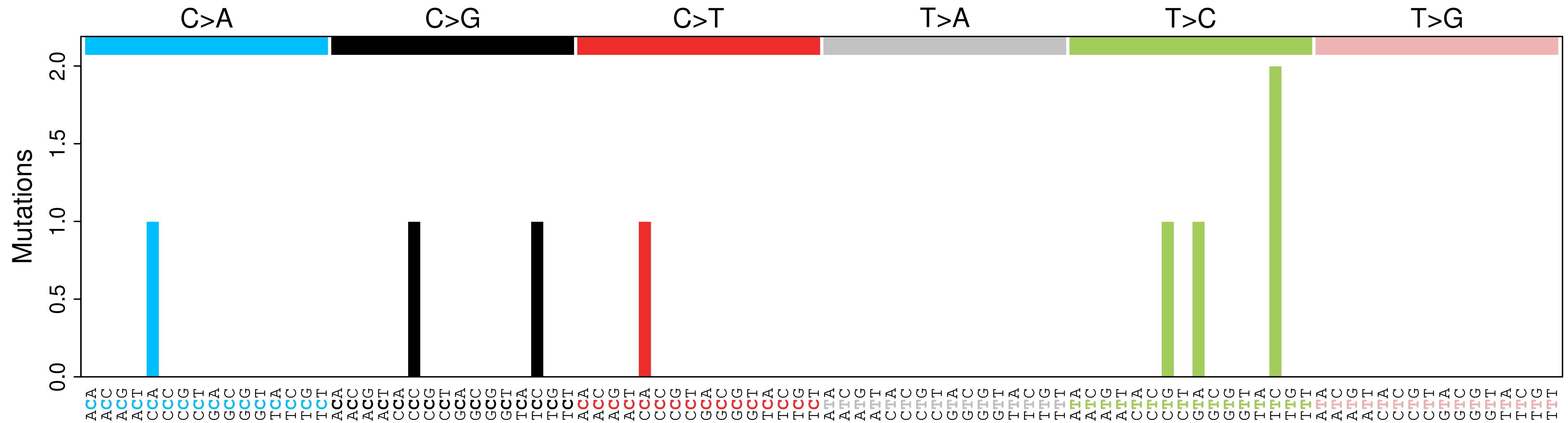




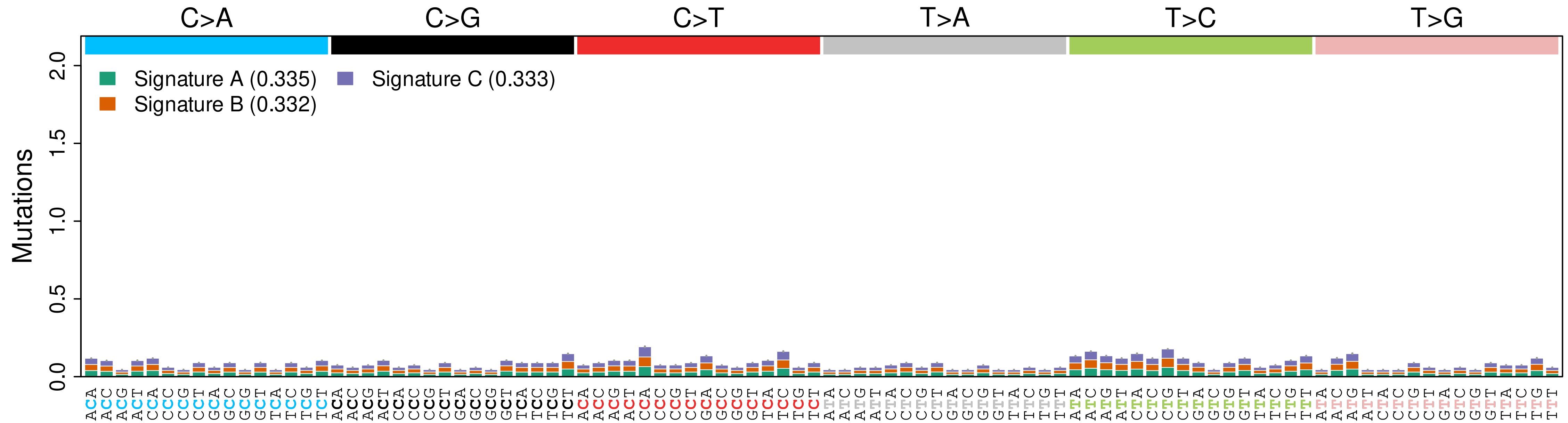




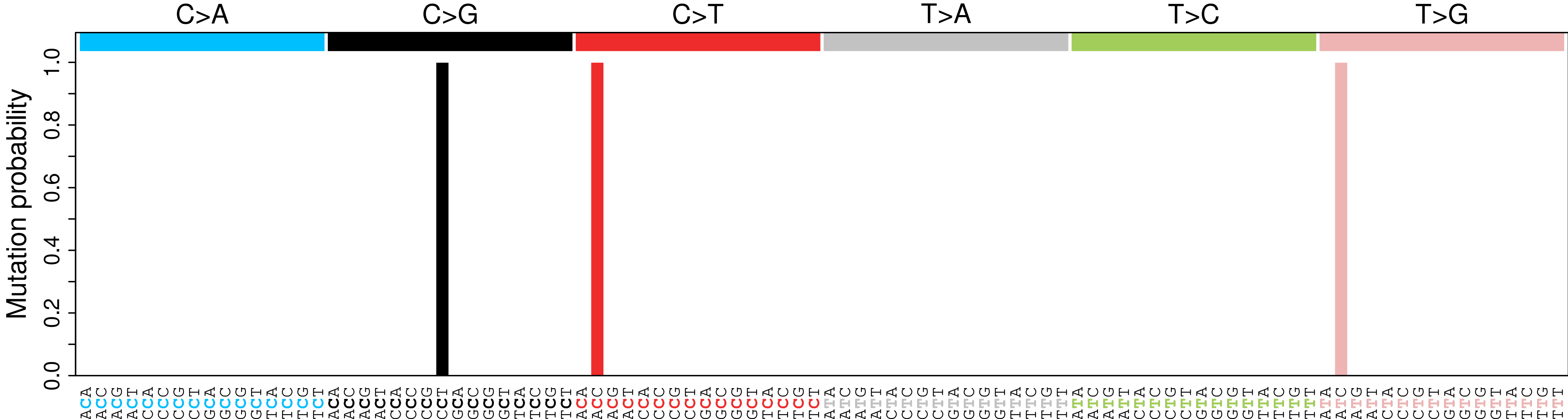
### CATD0087a (8 mutations)



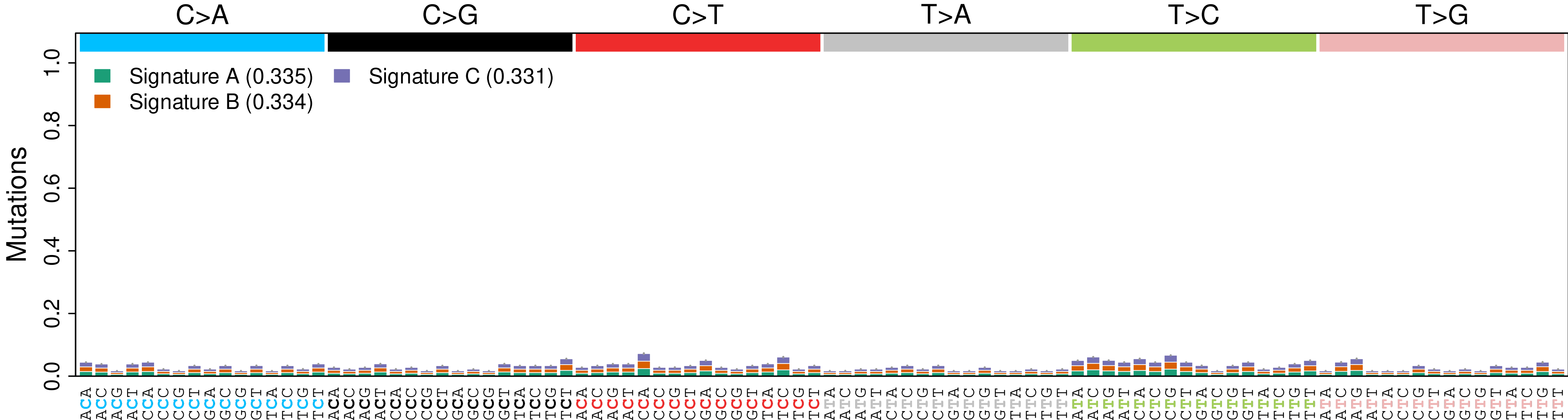
### Reconstructed spectrum (cosine similarity = 0.319)



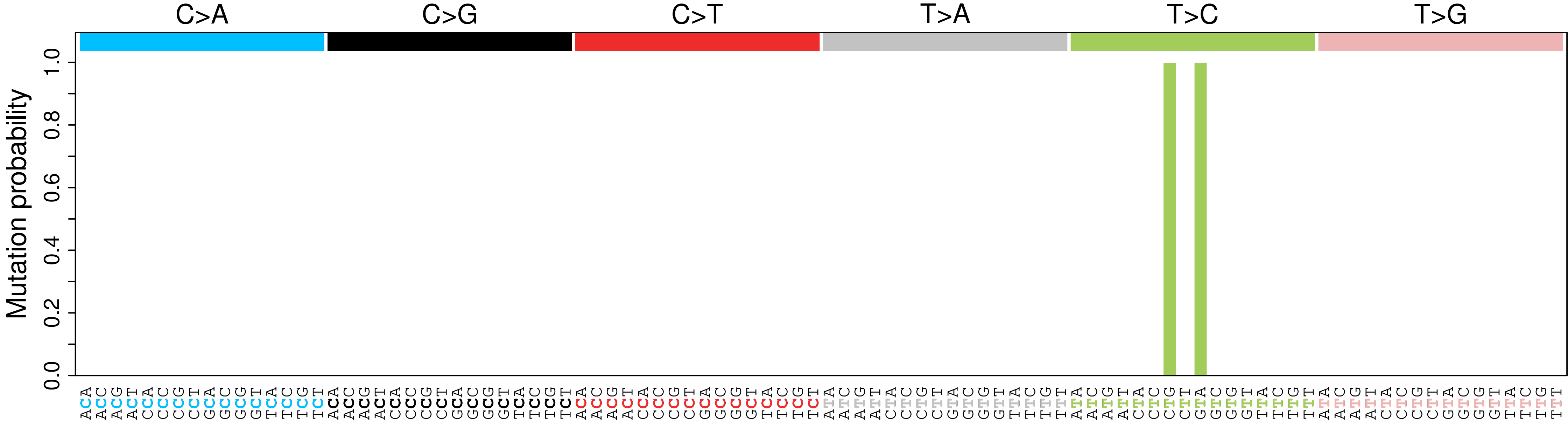
CATD0410a



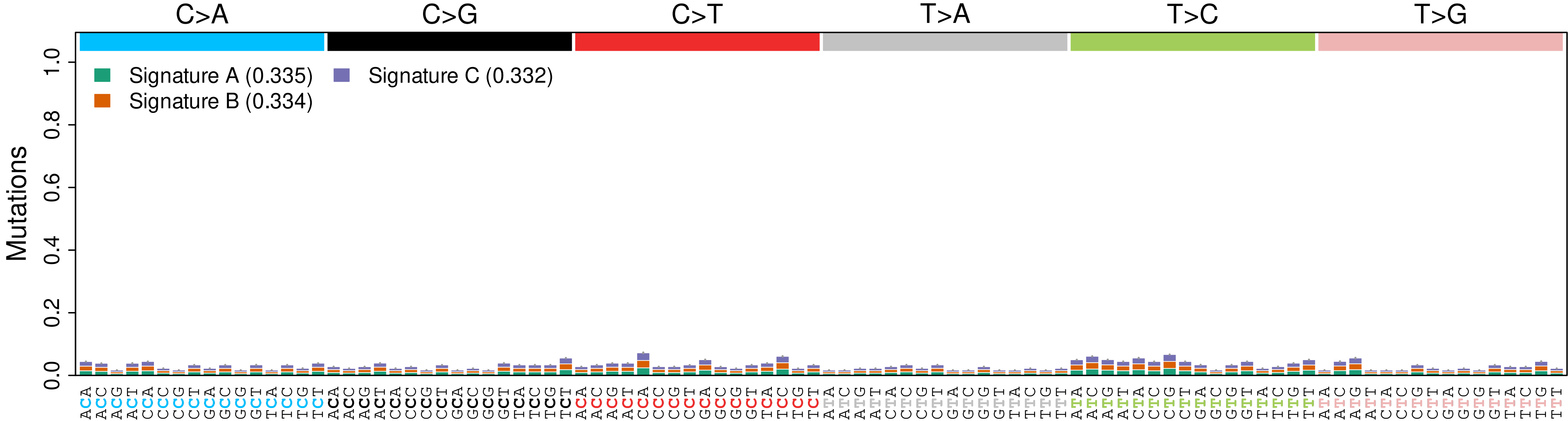
Reconstructed spectrum (cosine similarity = 0.194)



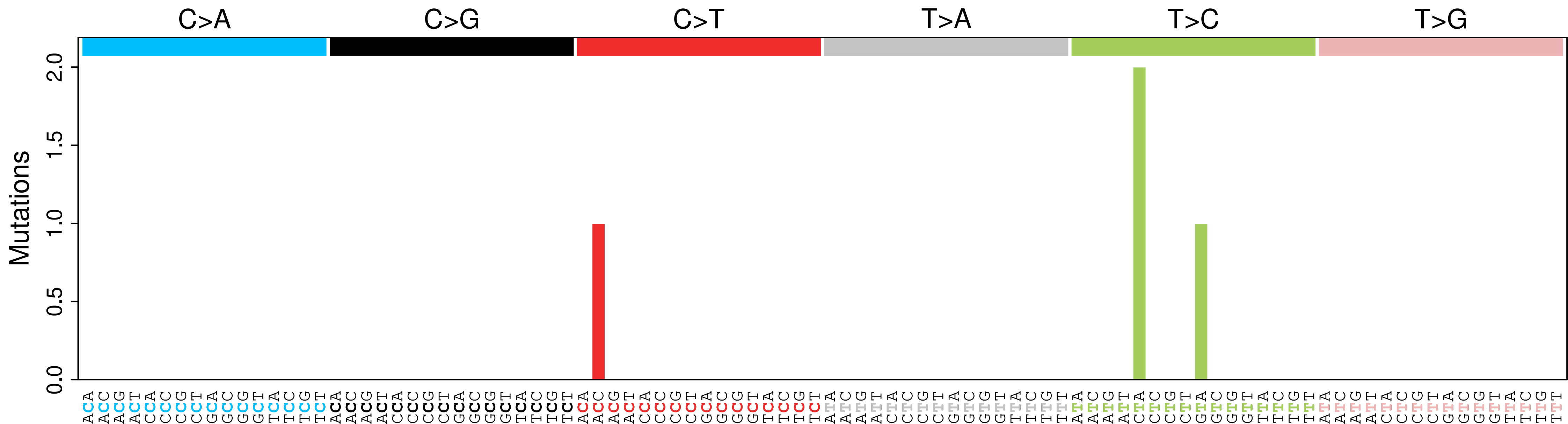
CATD0101a



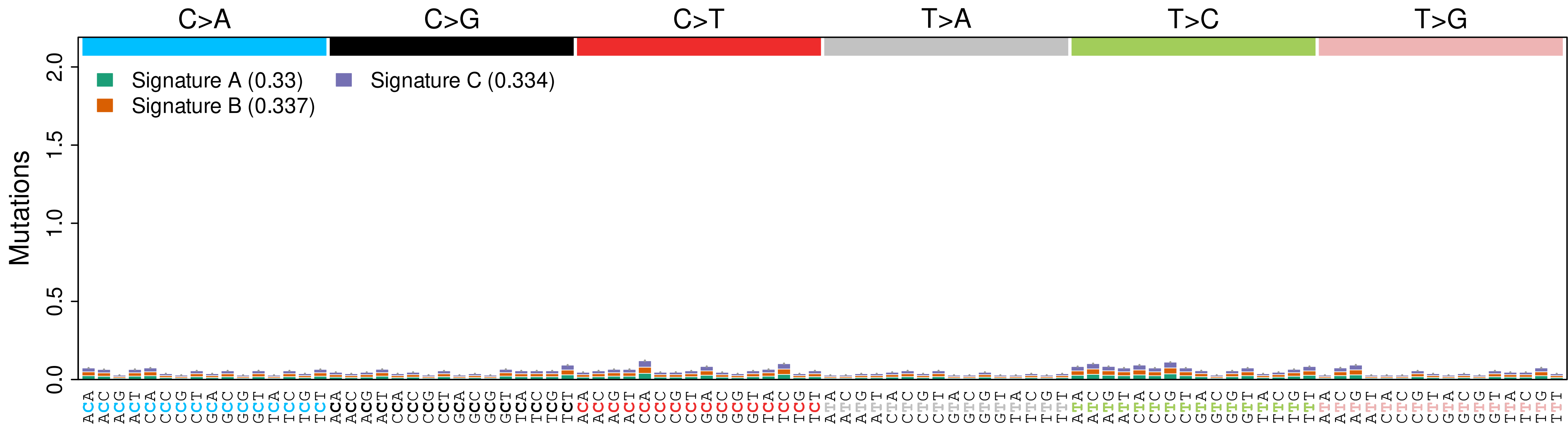
Reconstructed spectrum (cosine similarity = 0.214)



CATD0100a (4 mutations)

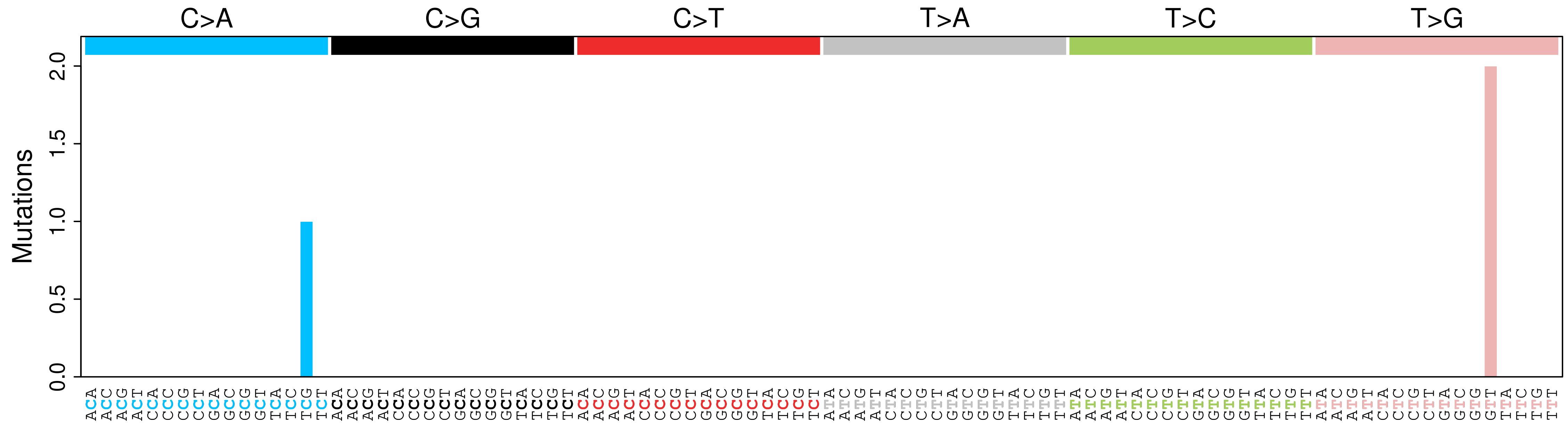


Reconstructed spectrum (cosine similarity = 0.22)

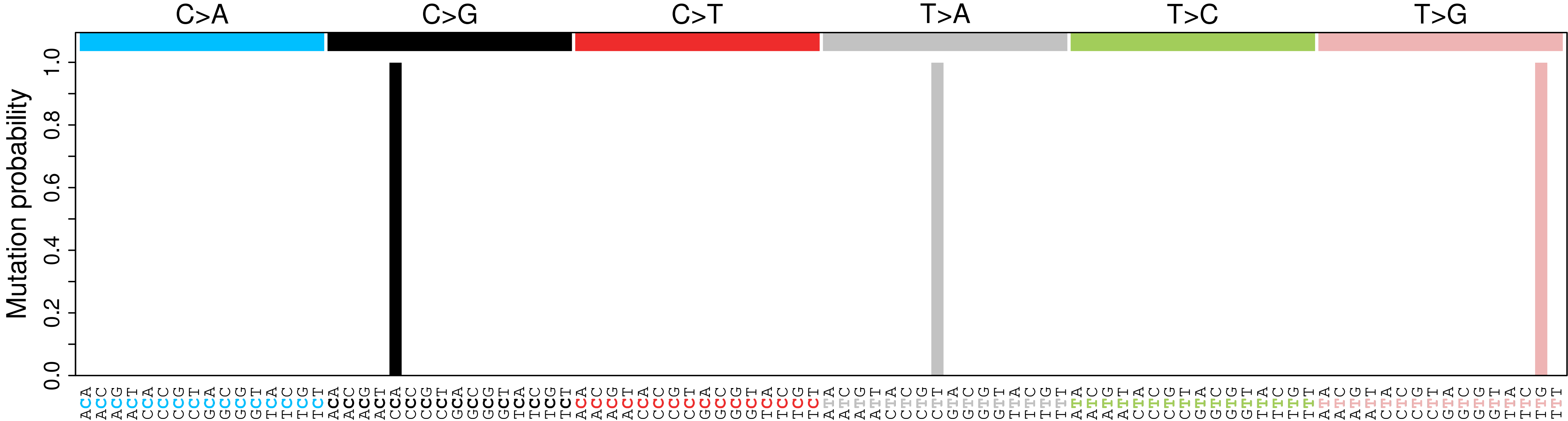




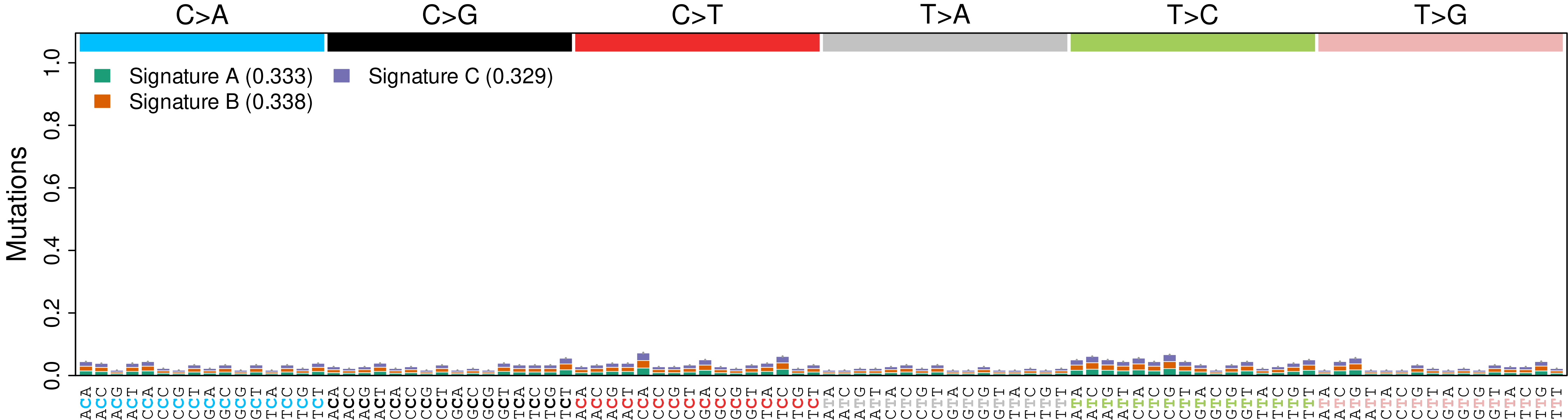
### CATD0108a (3 mutations)



CATD0082a

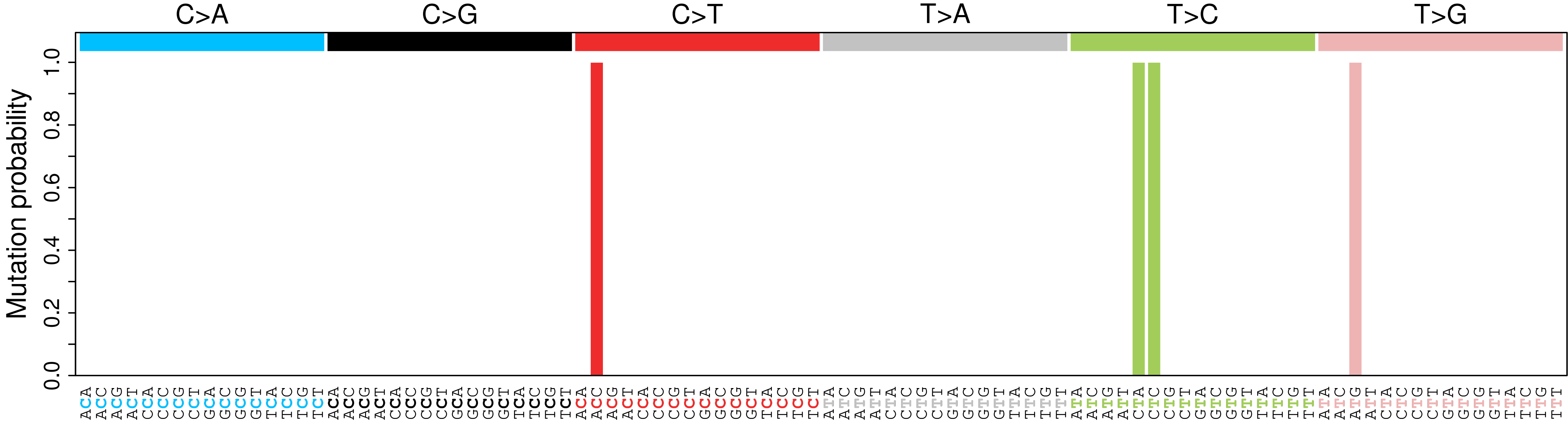


Reconstructed spectrum (cosine similarity = 0.175)

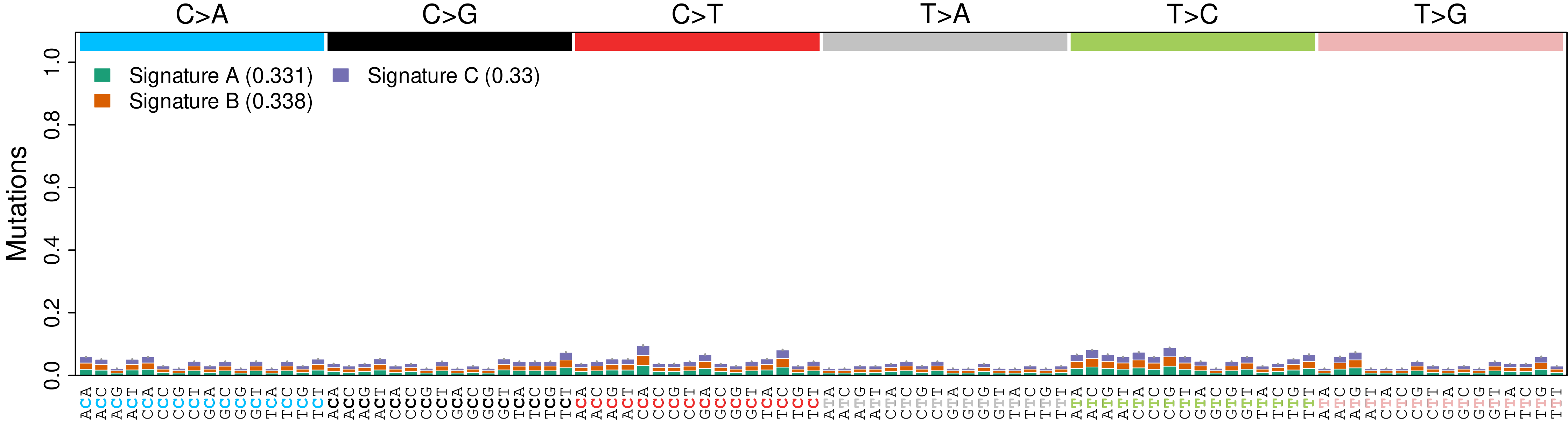




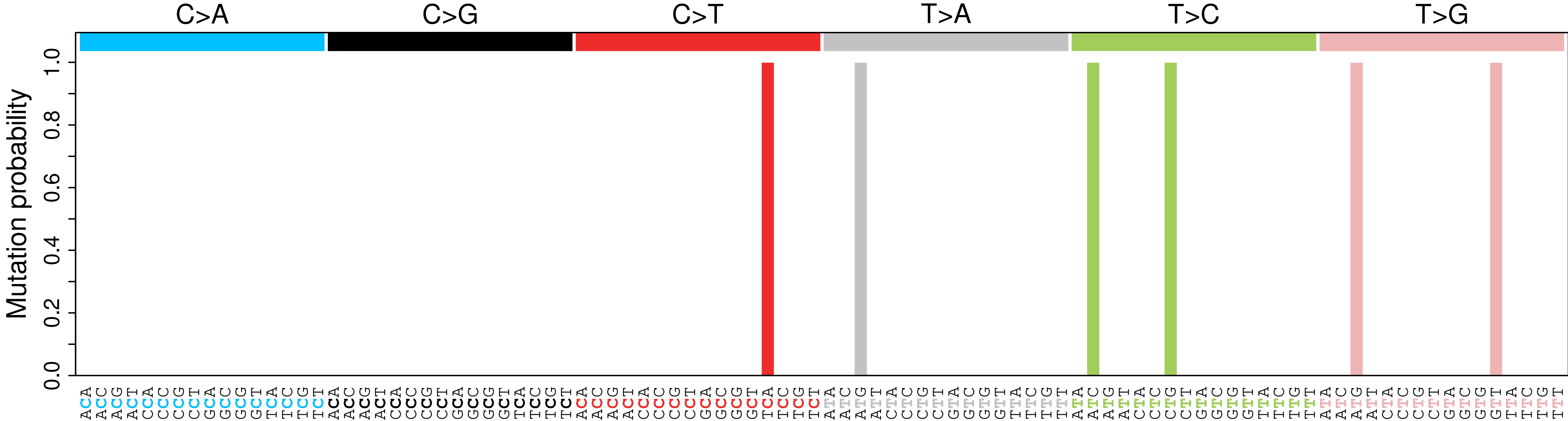
CATD0106a



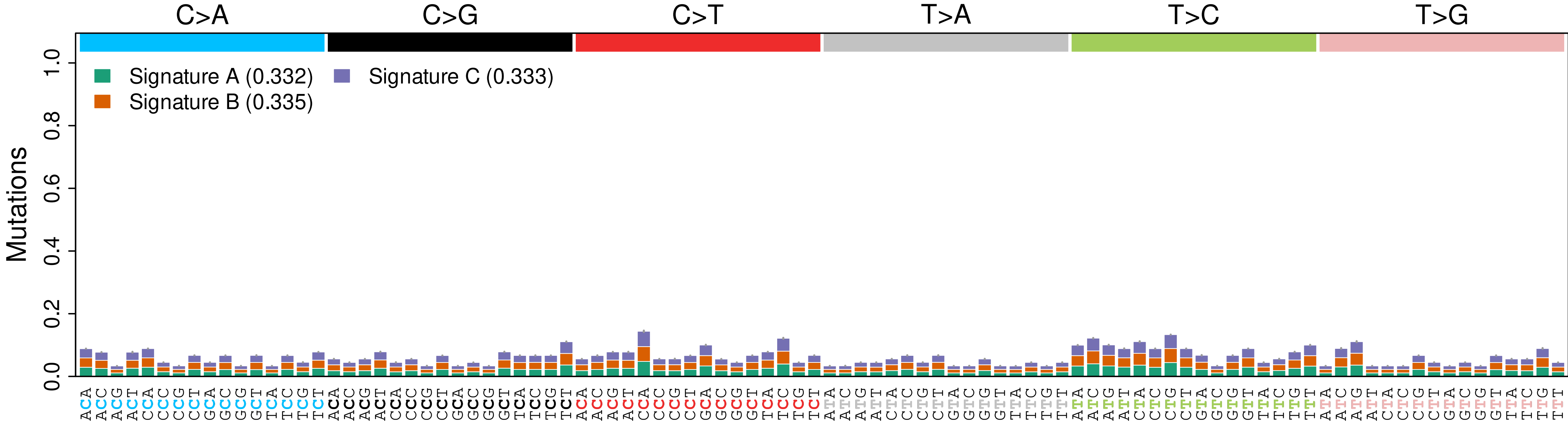
Reconstructed spectrum (cosine similarity = 0.285)



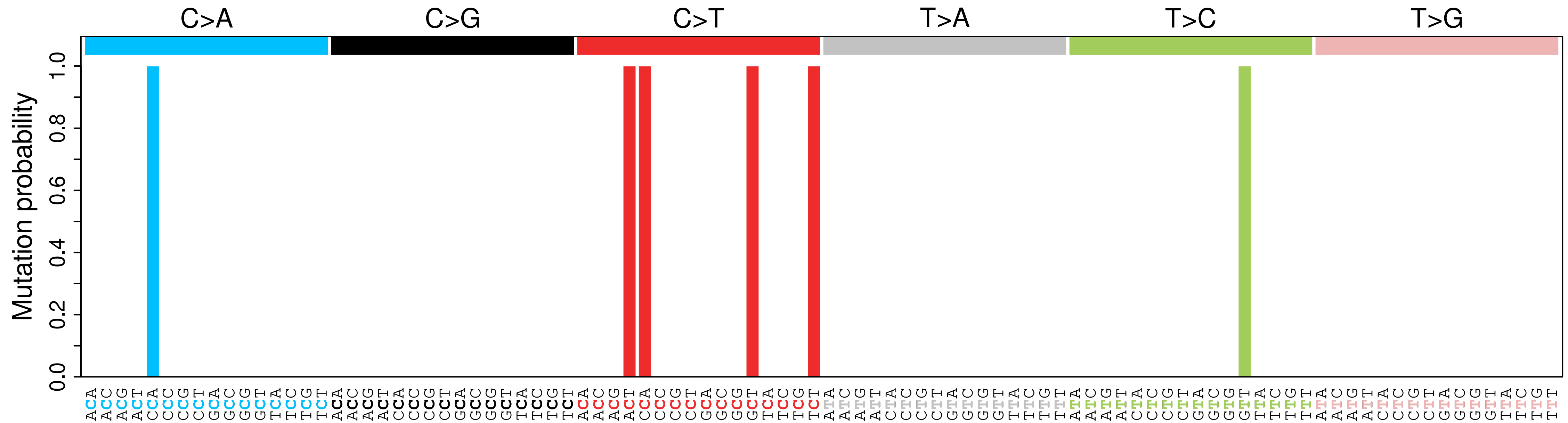
CATD0107a



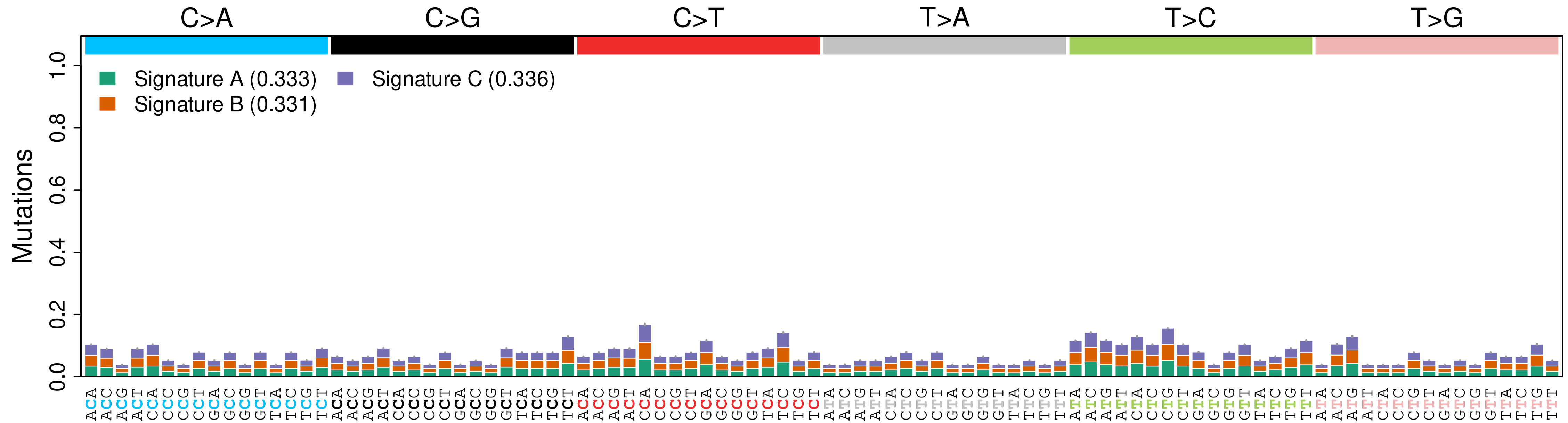
Reconstructed spectrum (cosine similarity = 0.343)



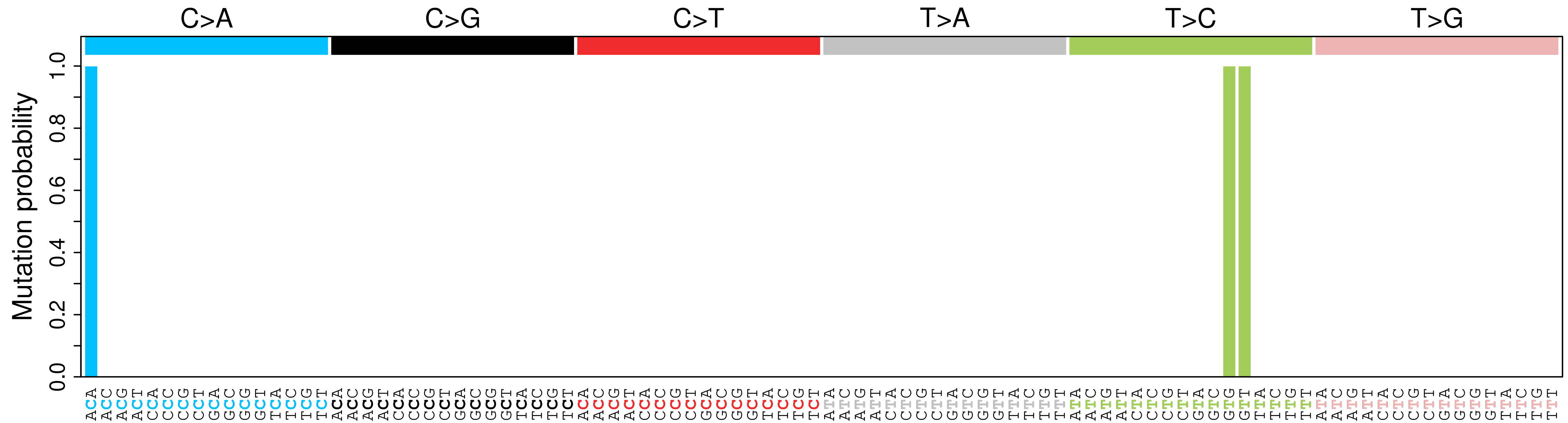
**CATD0097a**



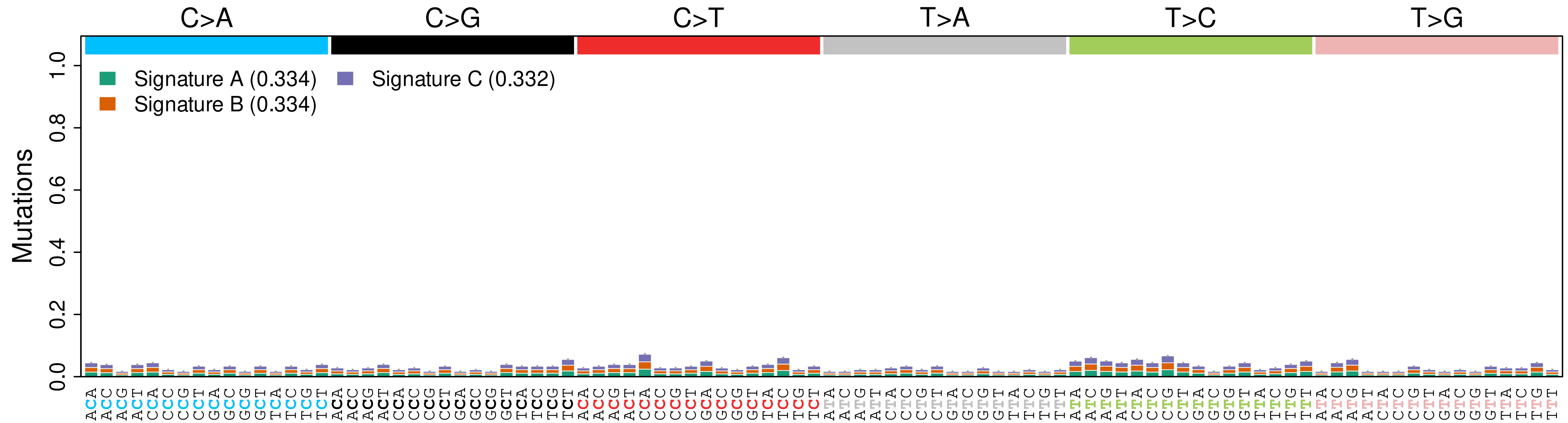
### Reconstructed spectrum (cosine similarity = 0.329)



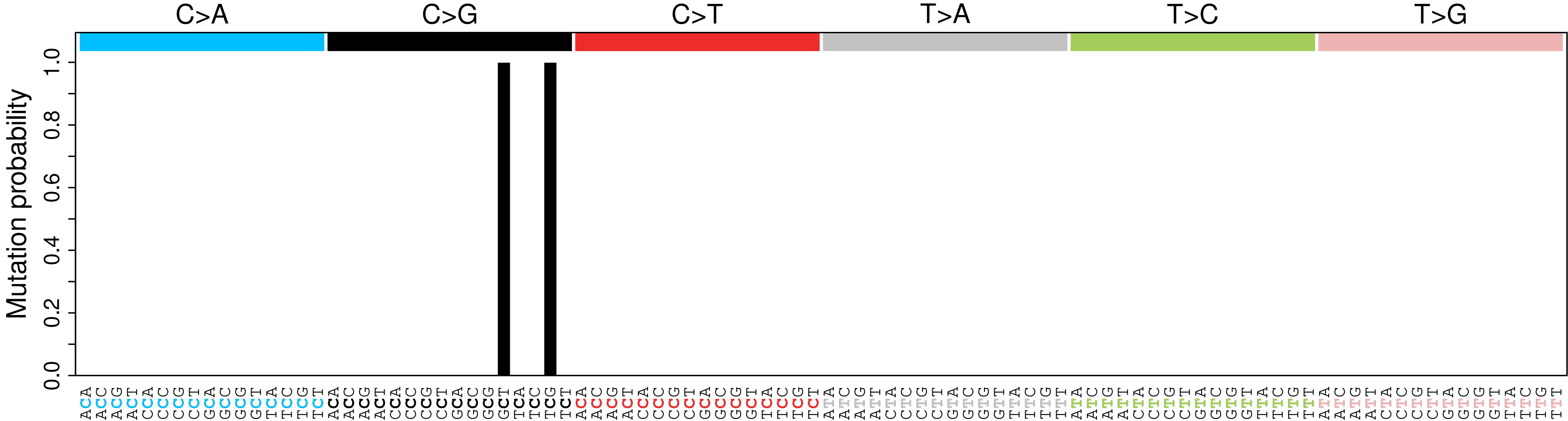
**CATD0112a**



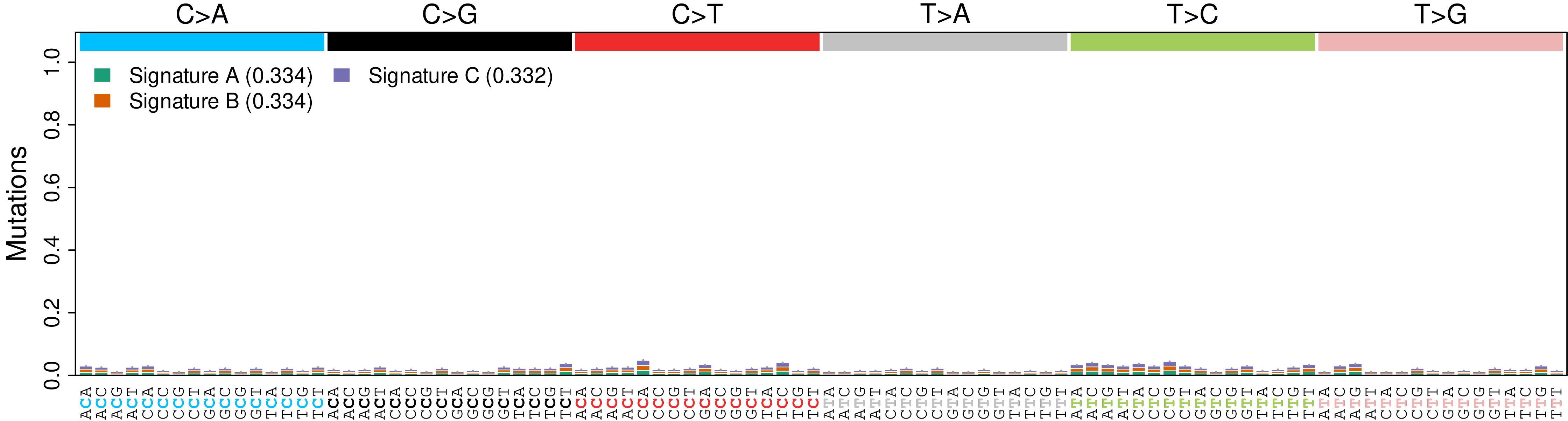
### Reconstructed spectrum (cosine similarity = 0.213)



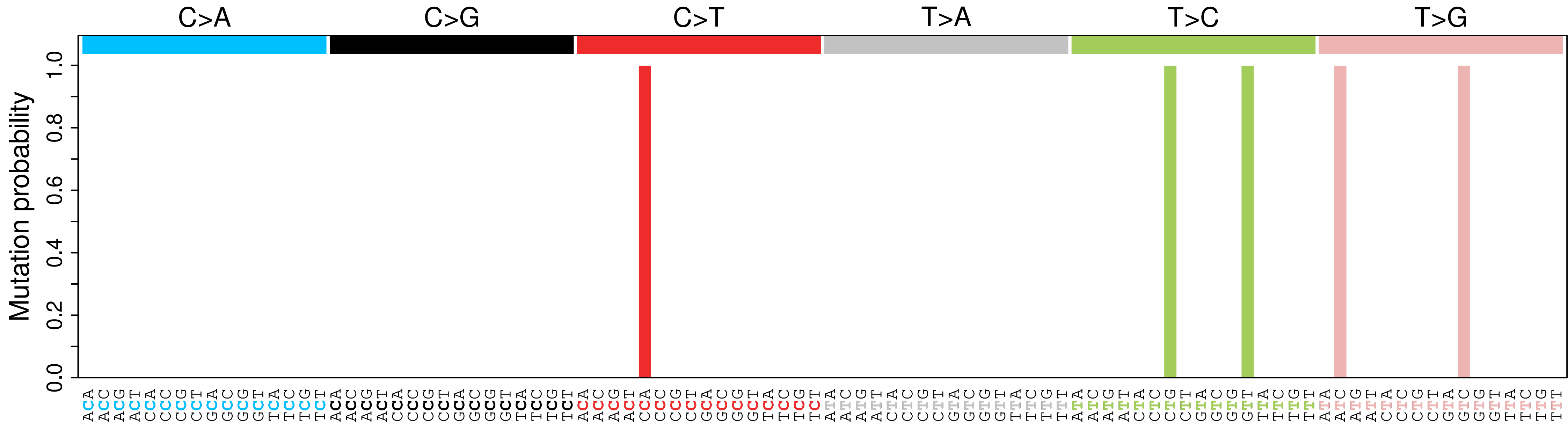
CATD0412a



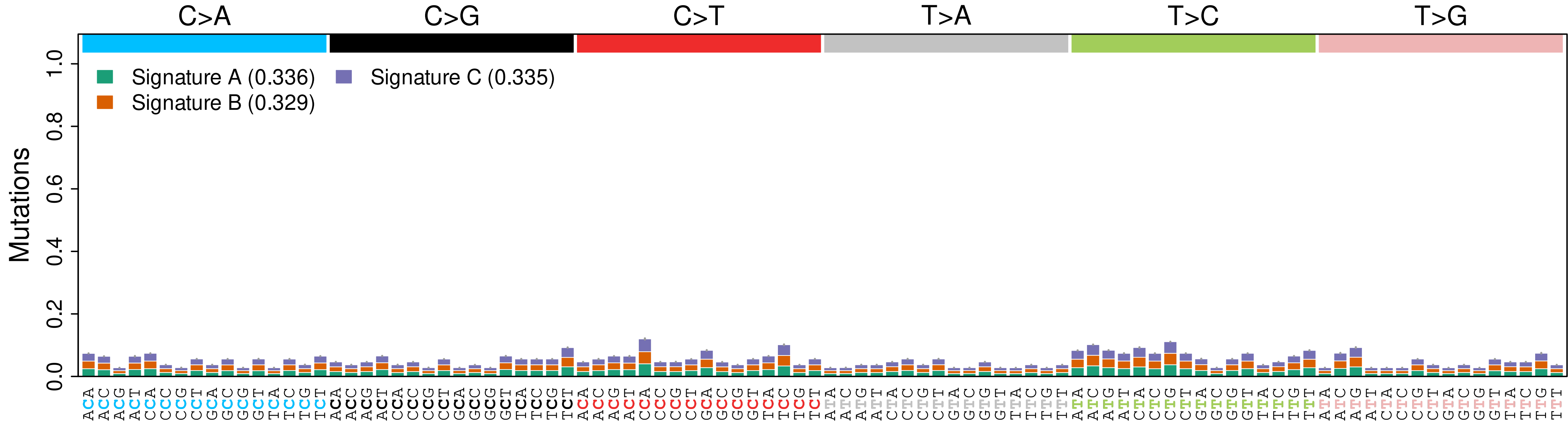
Reconstructed spectrum (cosine similarity = 0.155)



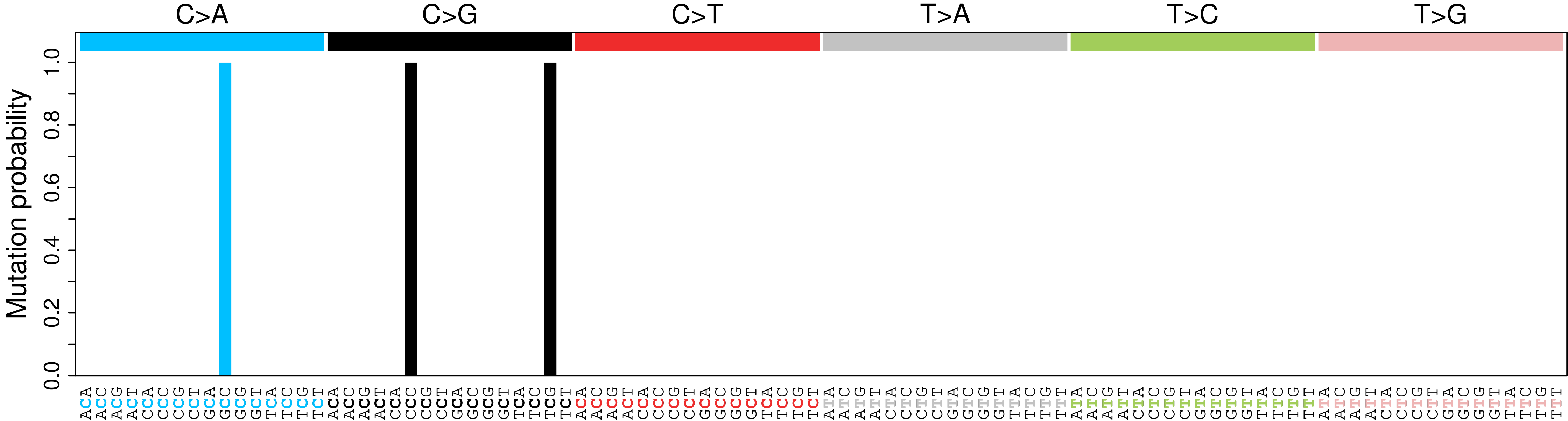
CATD0110a



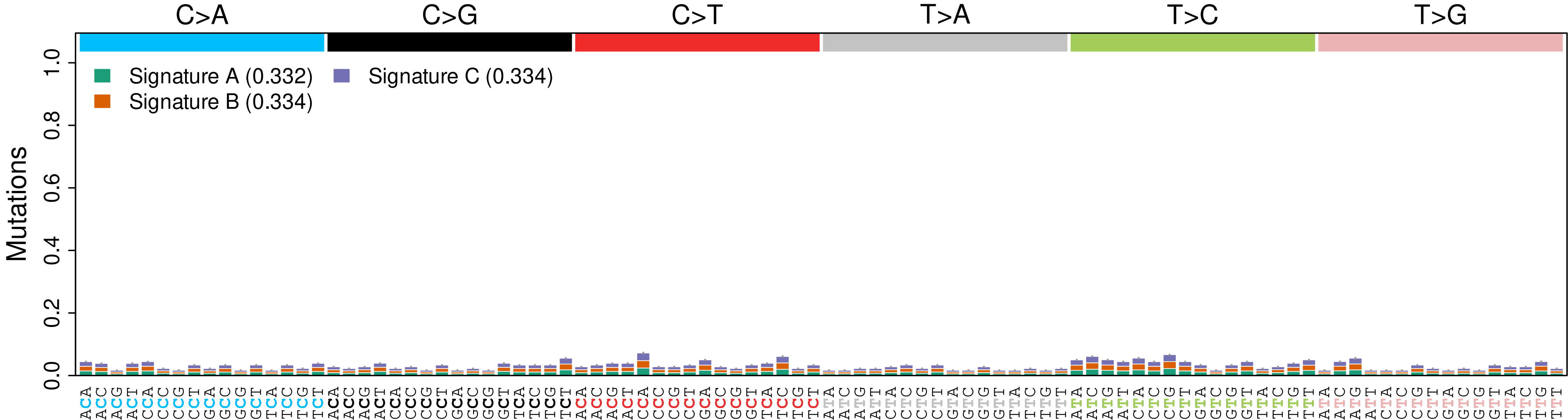
Reconstructed spectrum (cosine similarity = 0.338)



CATD0117a

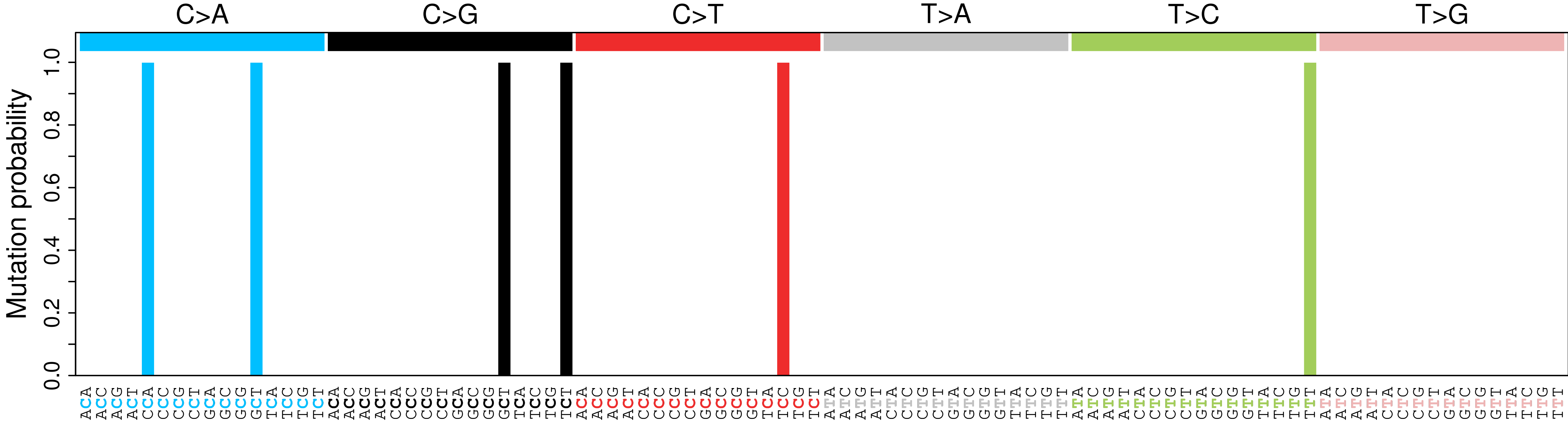


Reconstructed spectrum (cosine similarity = 0.165)

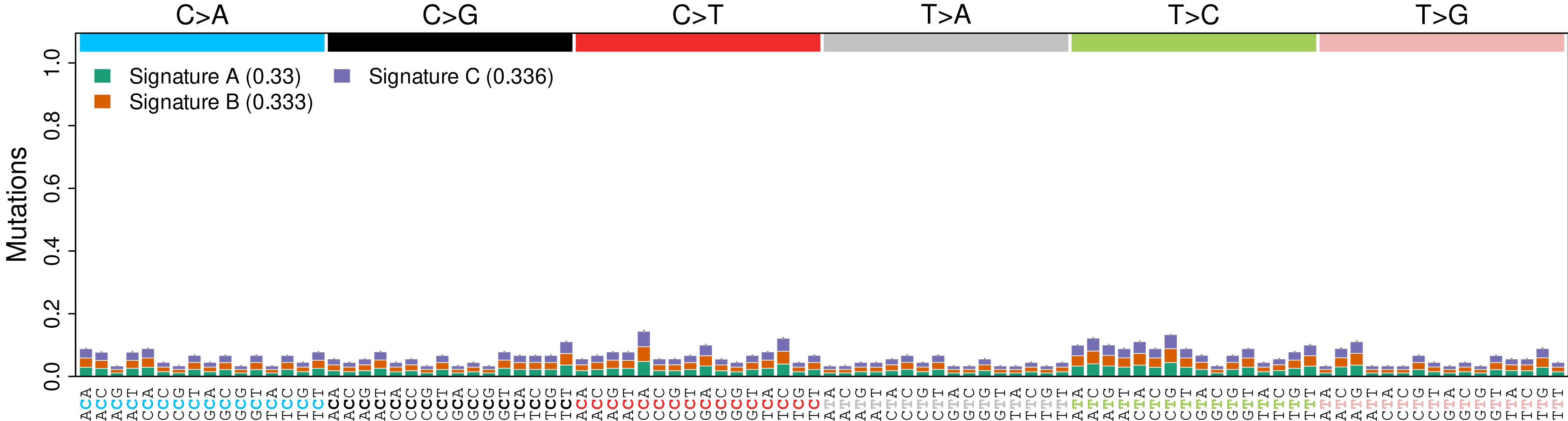




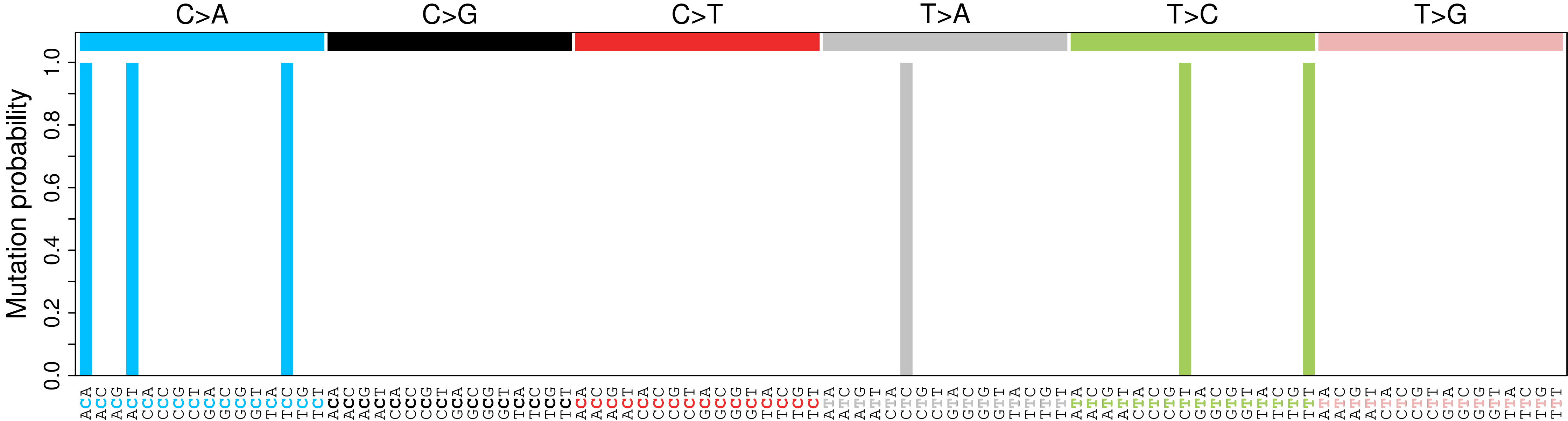
CATD0084a



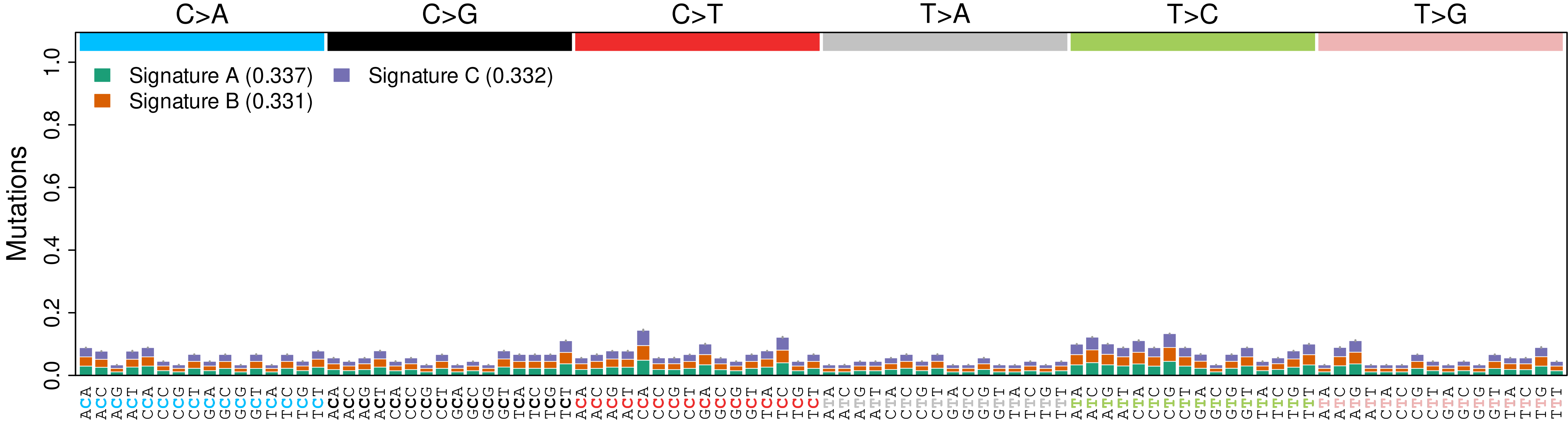
Reconstructed spectrum (cosine similarity = 0.349)



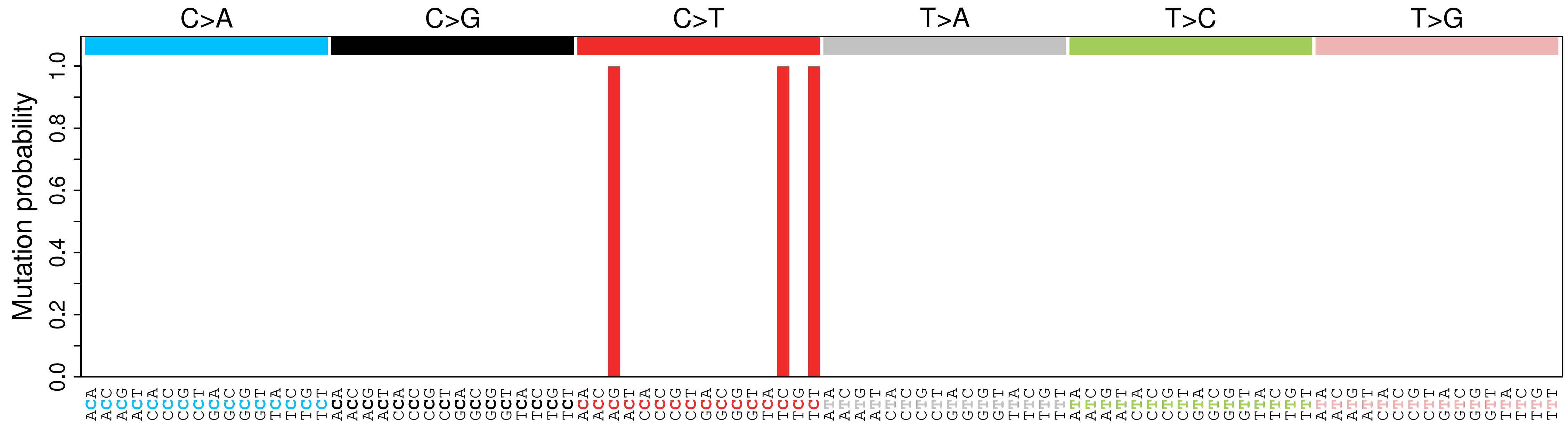
CATD0081a



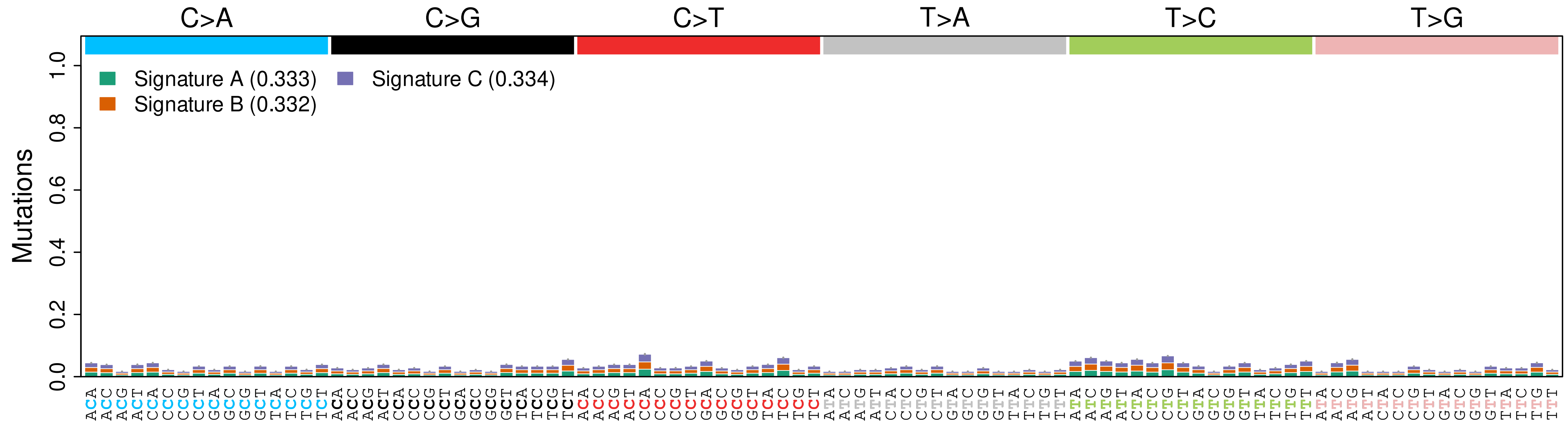
Reconstructed spectrum (cosine similarity = 0.301)



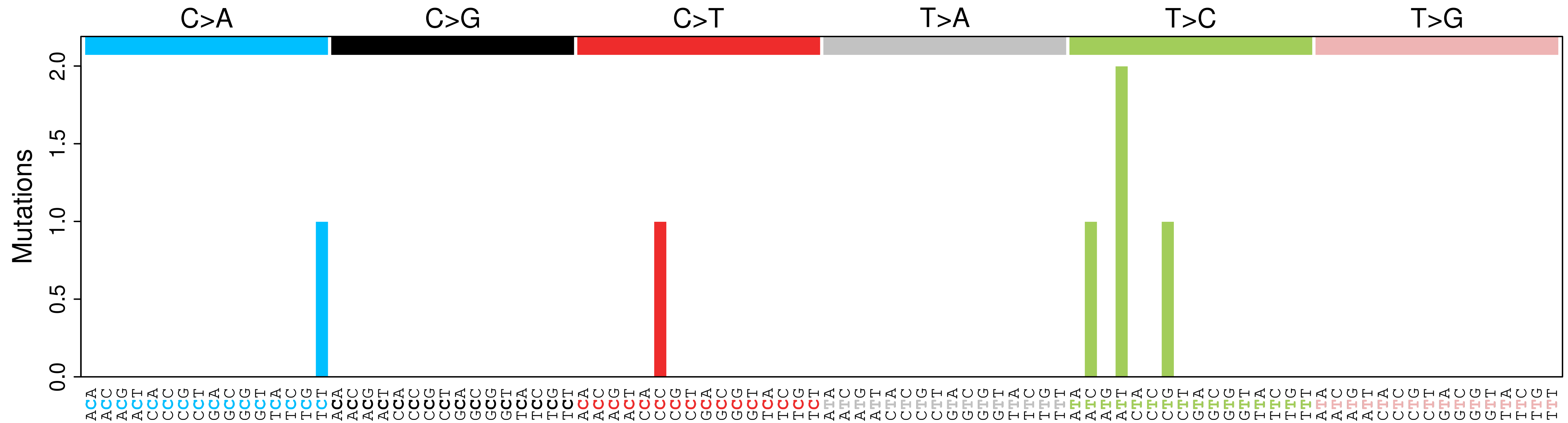
**CATD0092a**



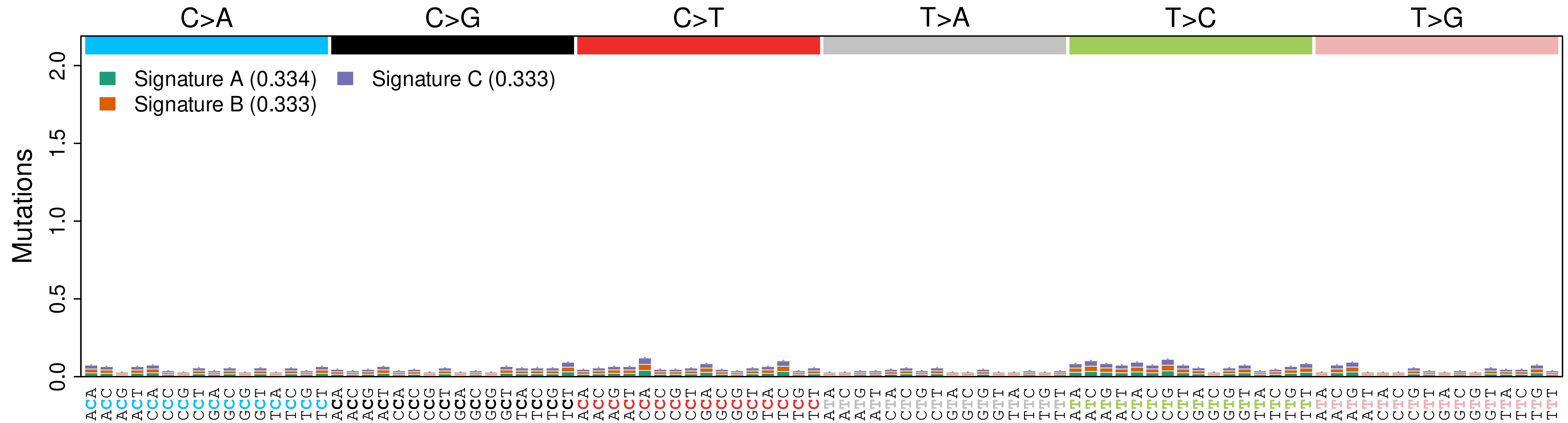
### Reconstructed spectrum (cosine similarity = 0.233)



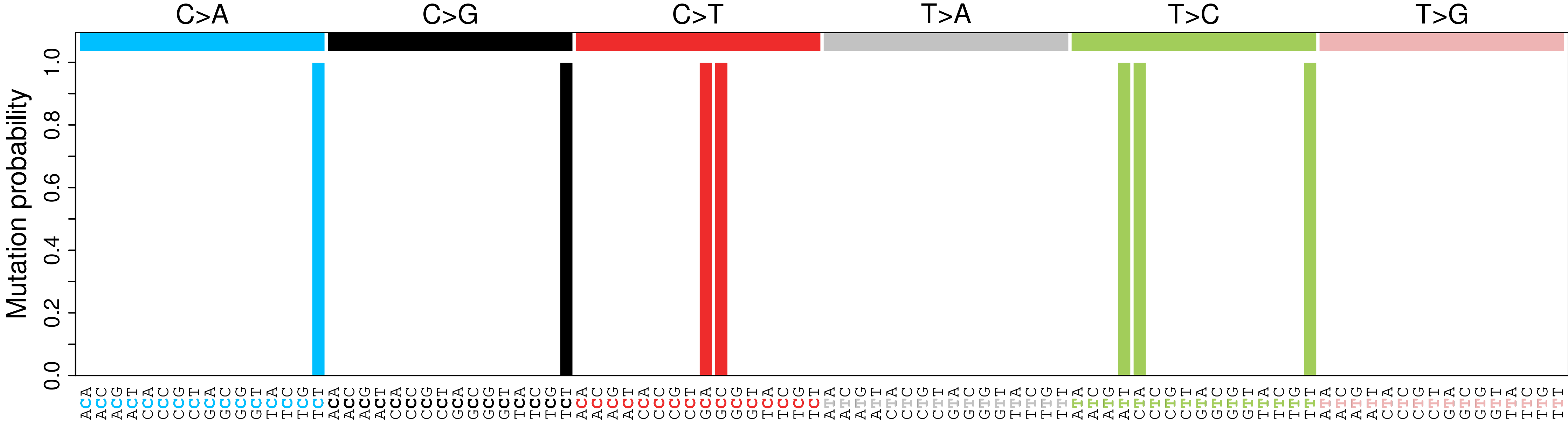
### CATD0111a (6 mutations)



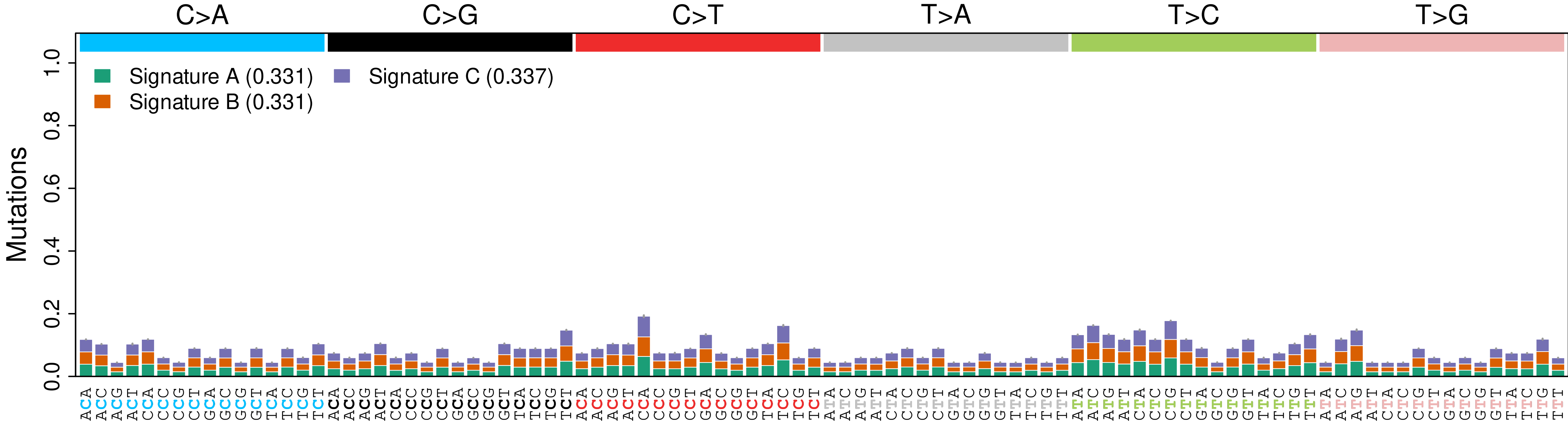
### Reconstructed spectrum (cosine similarity = 0.303)



CATD0114a

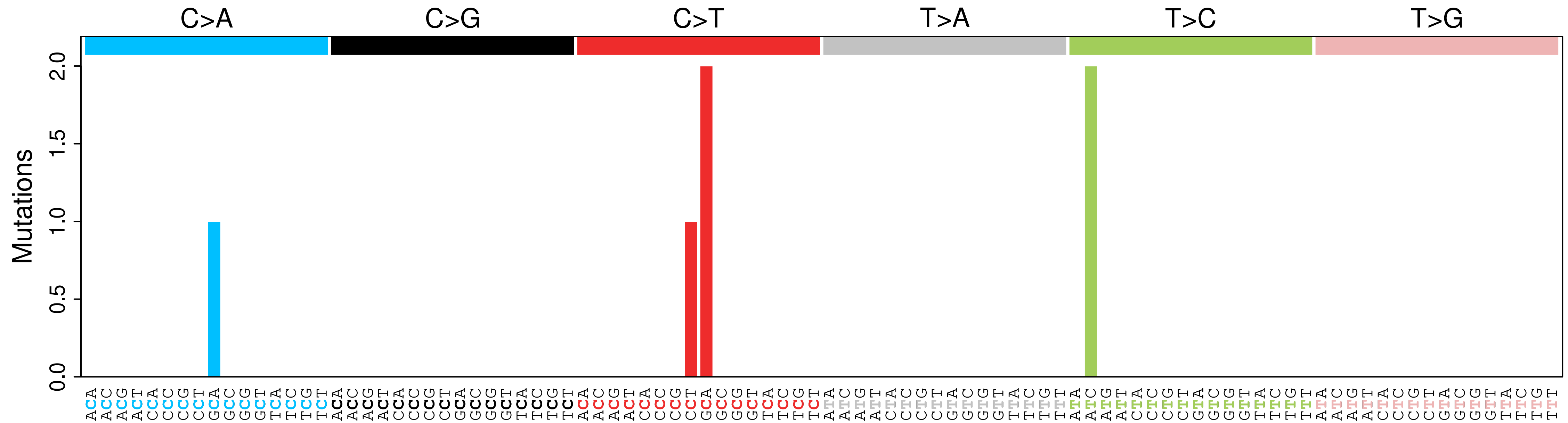


Reconstructed spectrum (cosine similarity = 0.367)



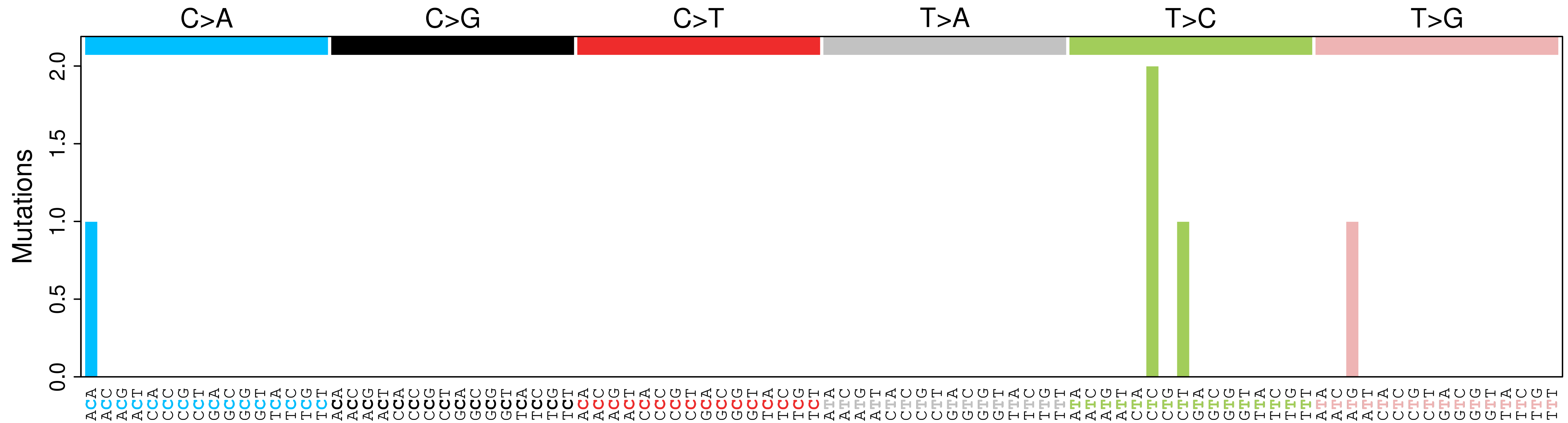


### CATD0099a (6 mutations)

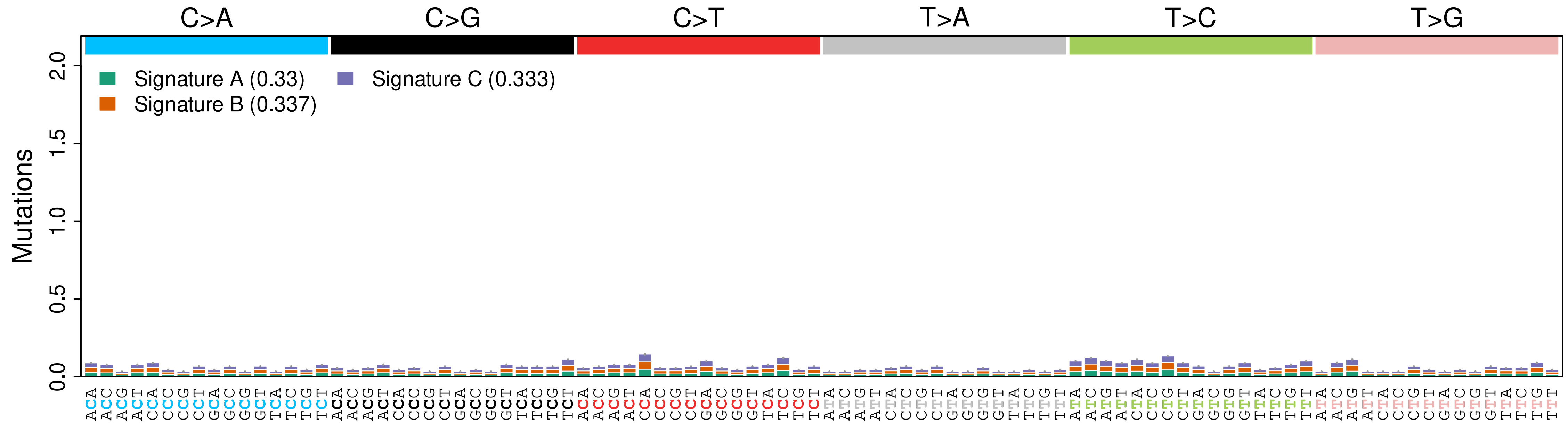




### CATD0091a (5 mutations)

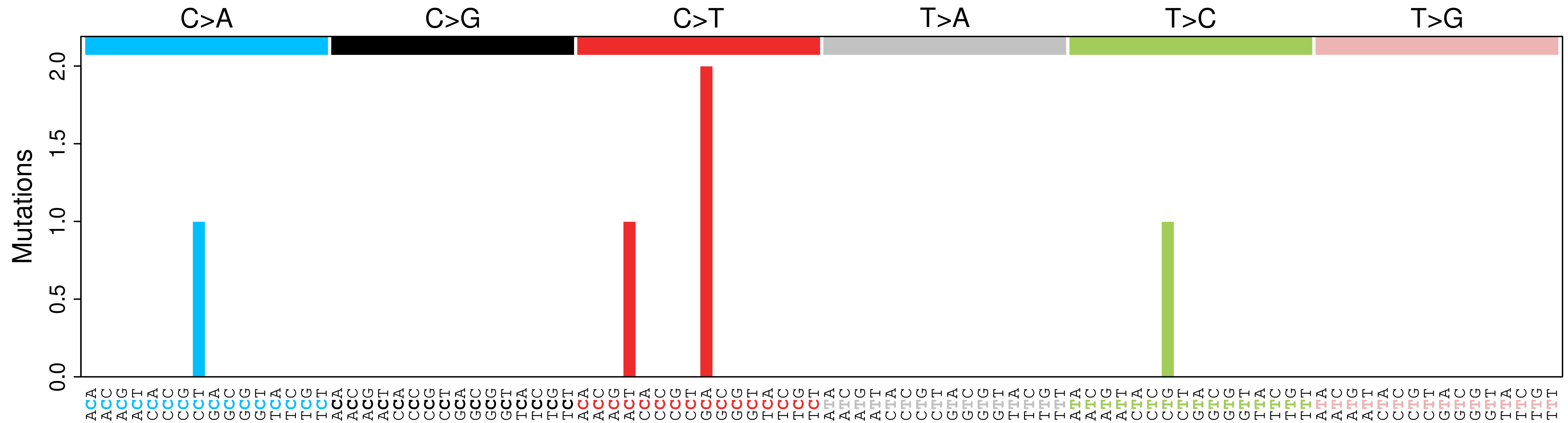


### Reconstructed spectrum (cosine similarity = 0.266)

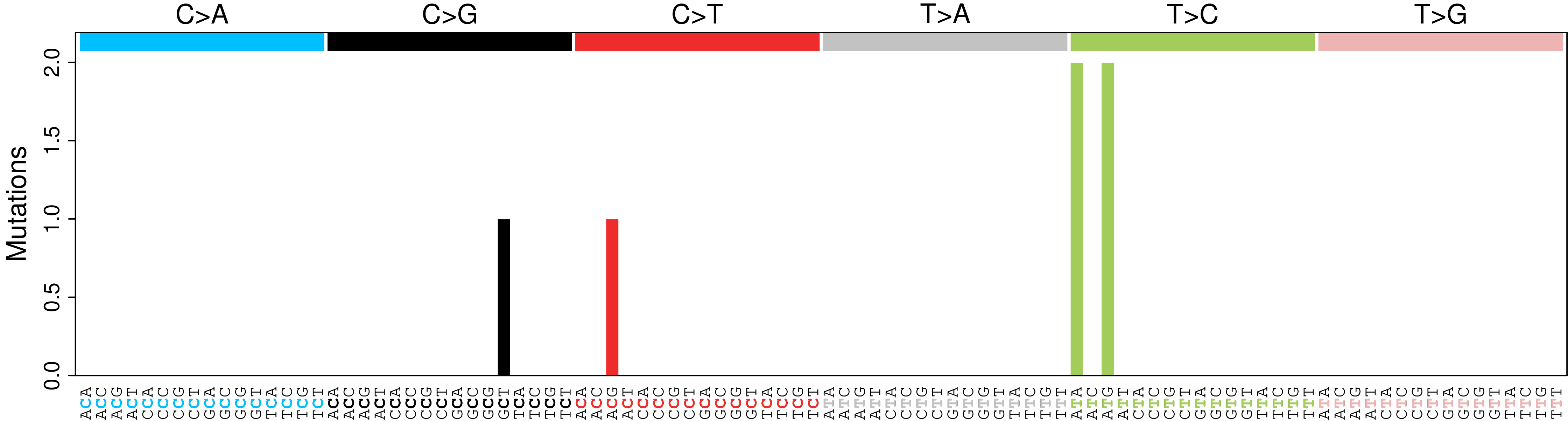




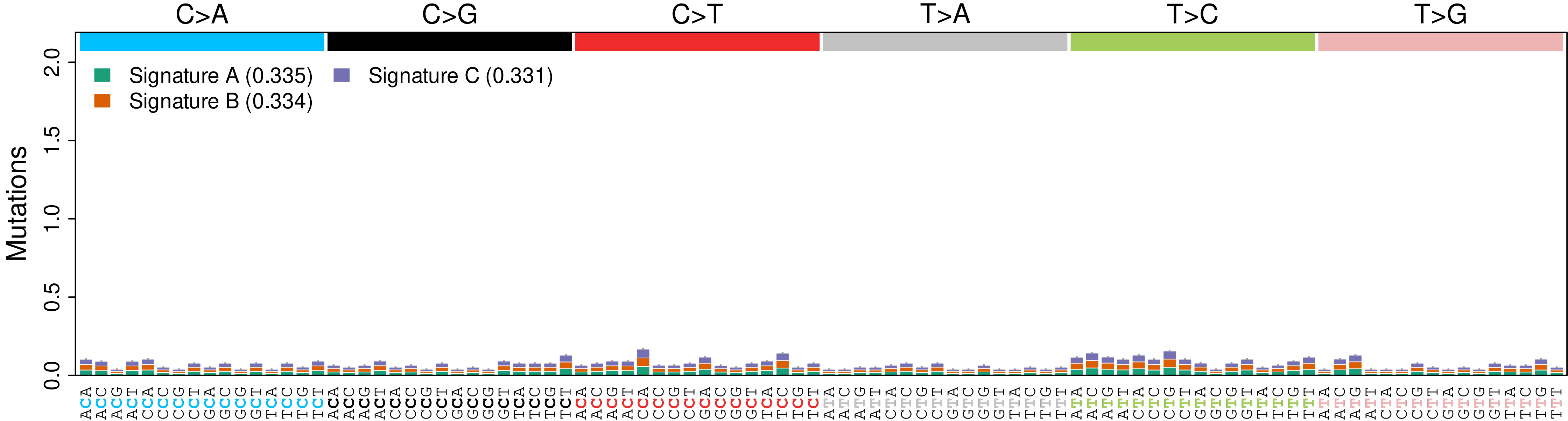
### CATD0405a (5 mutations)



CATD188a (6 mutations)

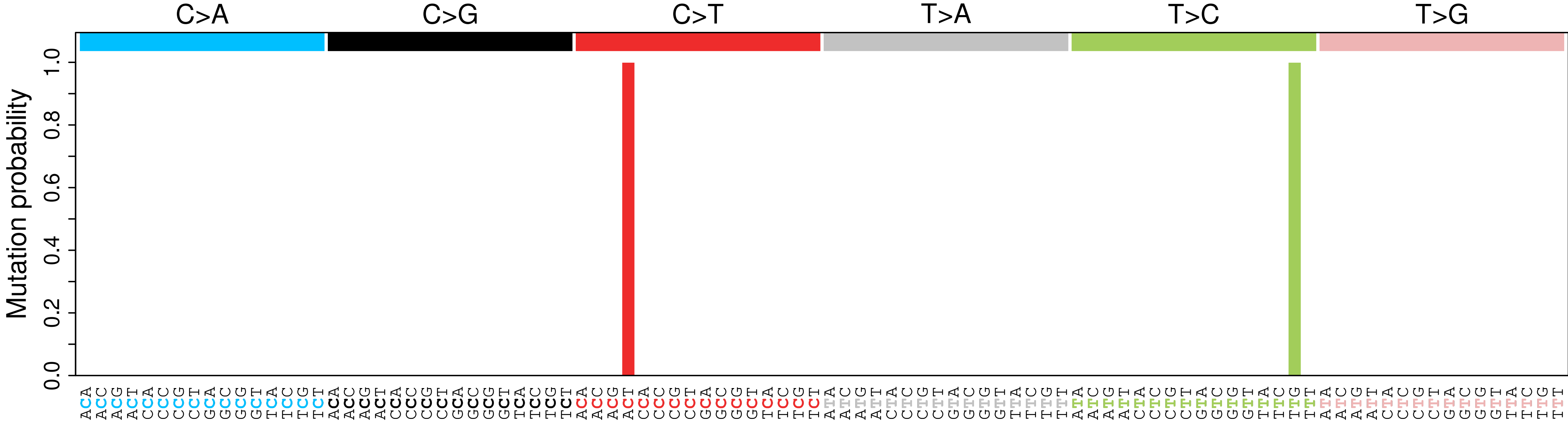


Reconstructed spectrum (cosine similarity = 0.266)

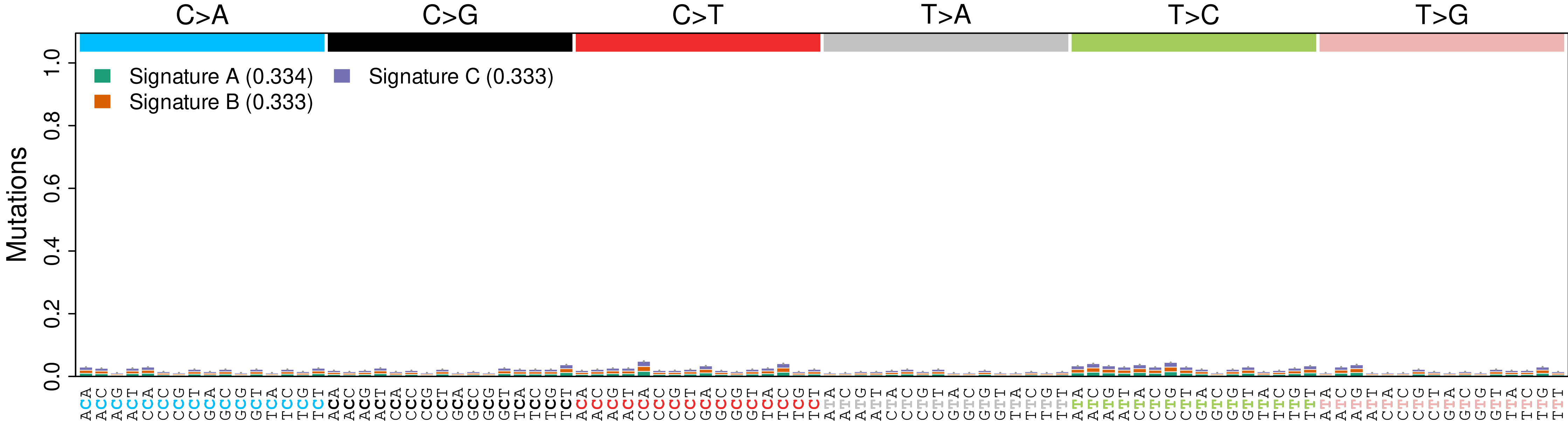




CATD0096a



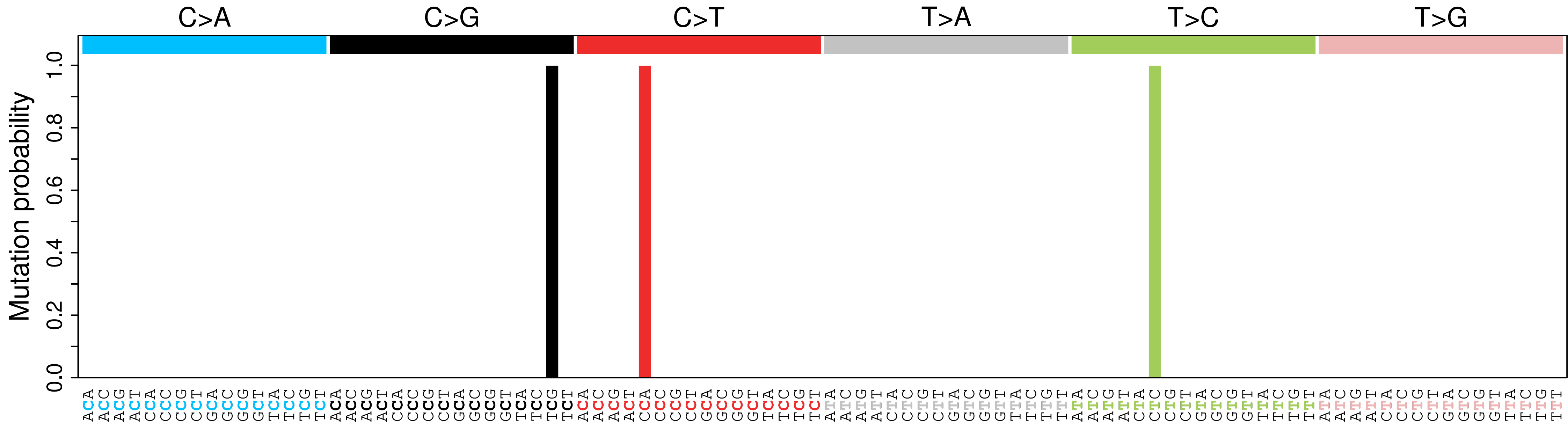
Reconstructed spectrum (cosine similarity = 0.167)



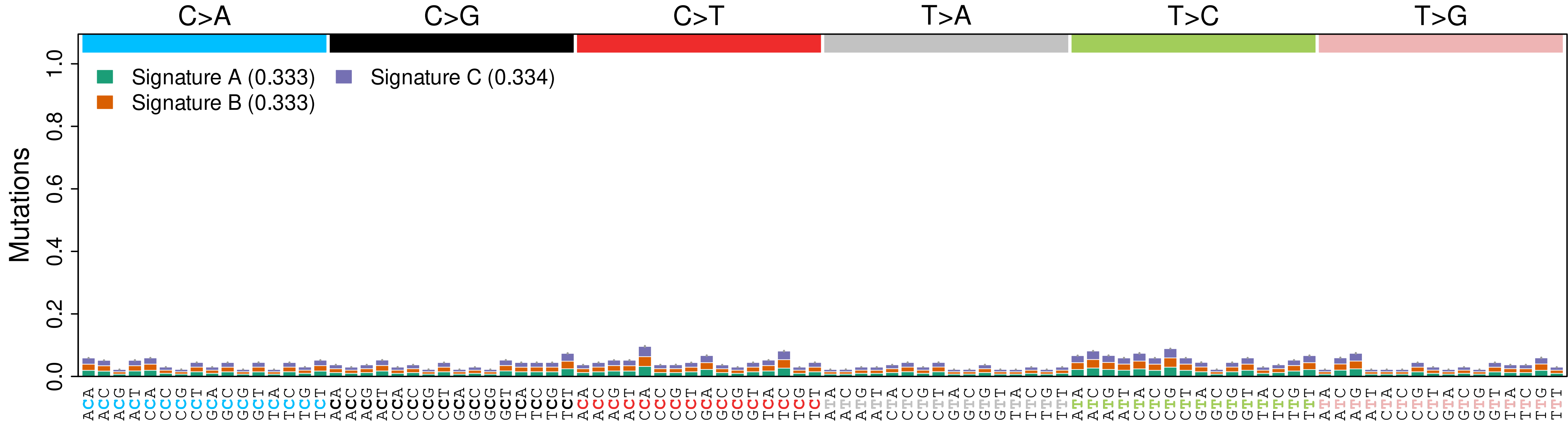




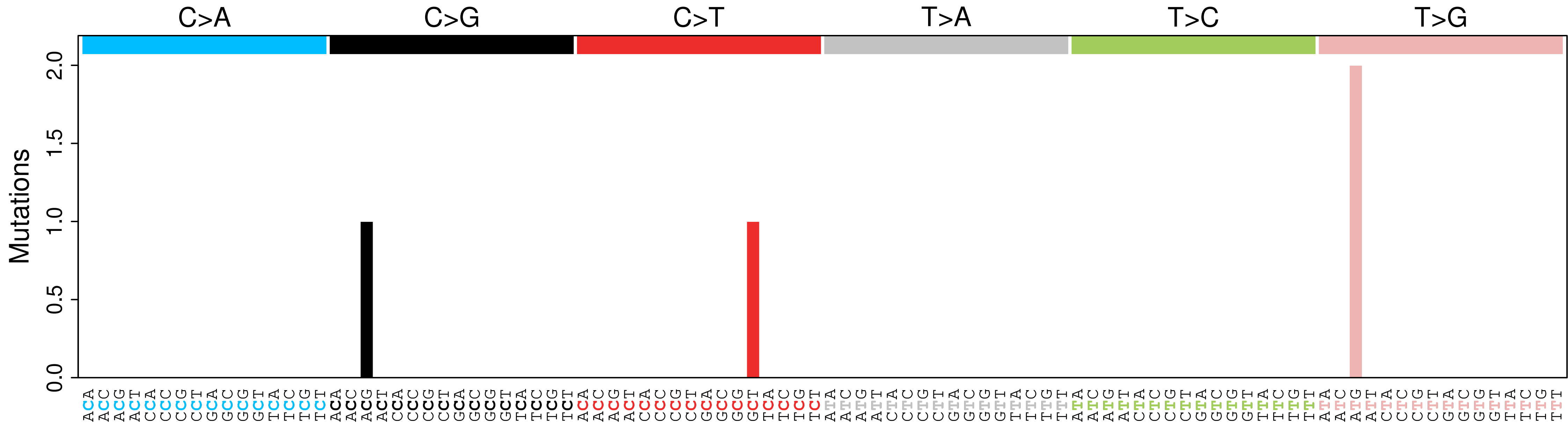
CATD0113a



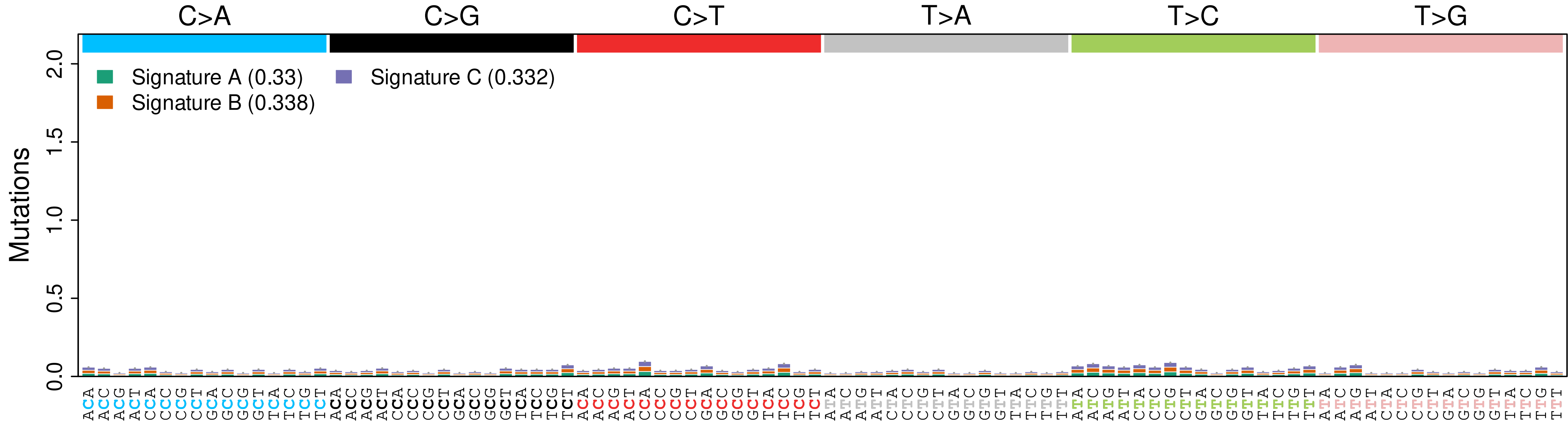
Reconstructed spectrum (cosine similarity = 0.261)



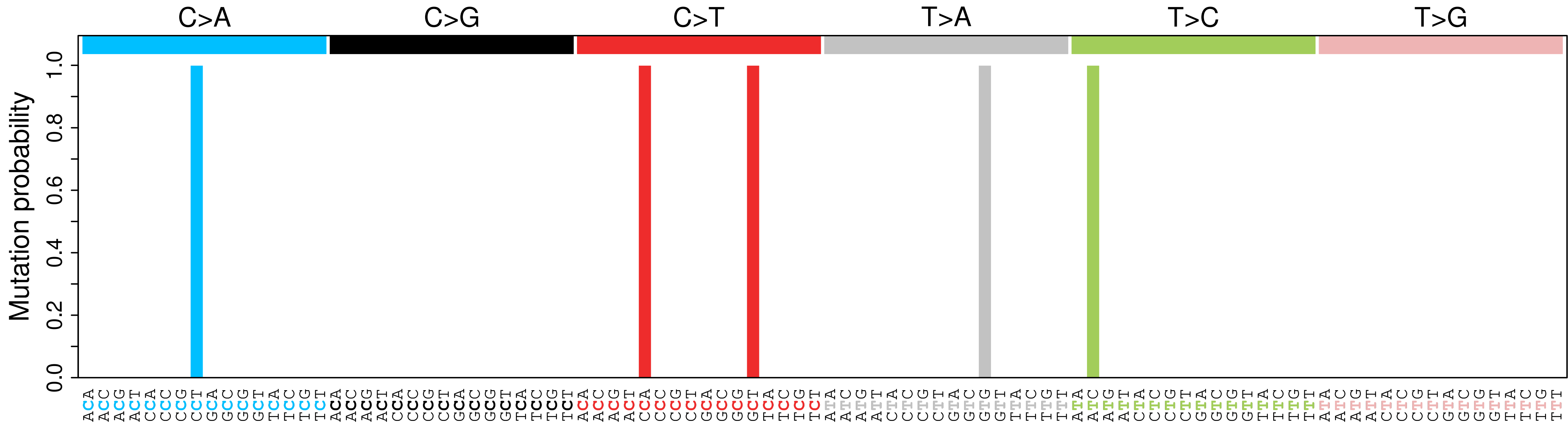
CATD0403a (4 mutations)



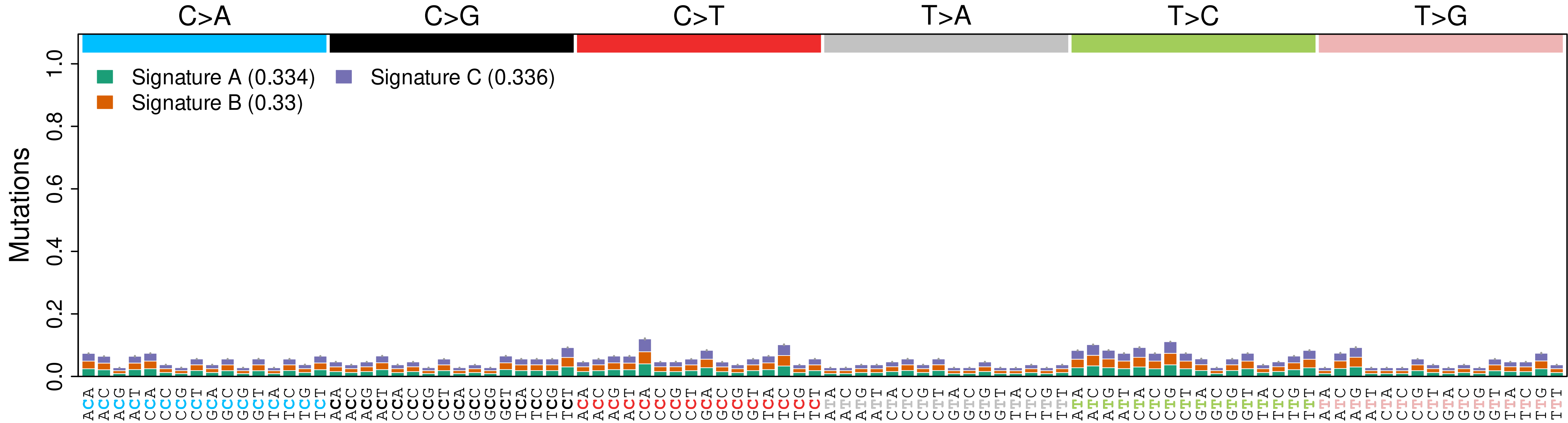
Reconstructed spectrum (cosine similarity = 0.212)



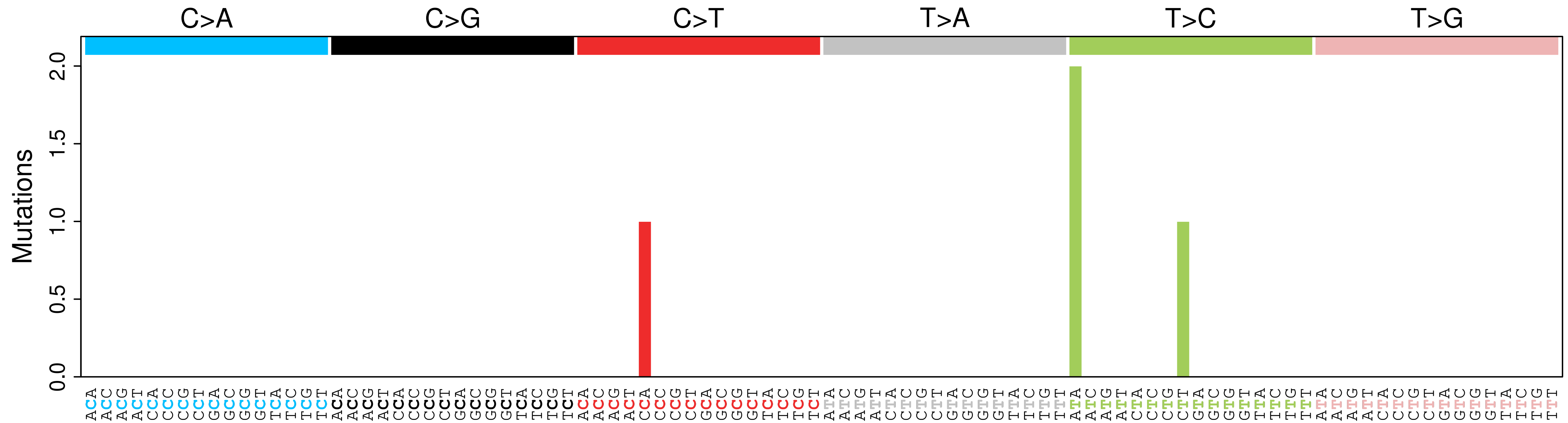
CATD0085a



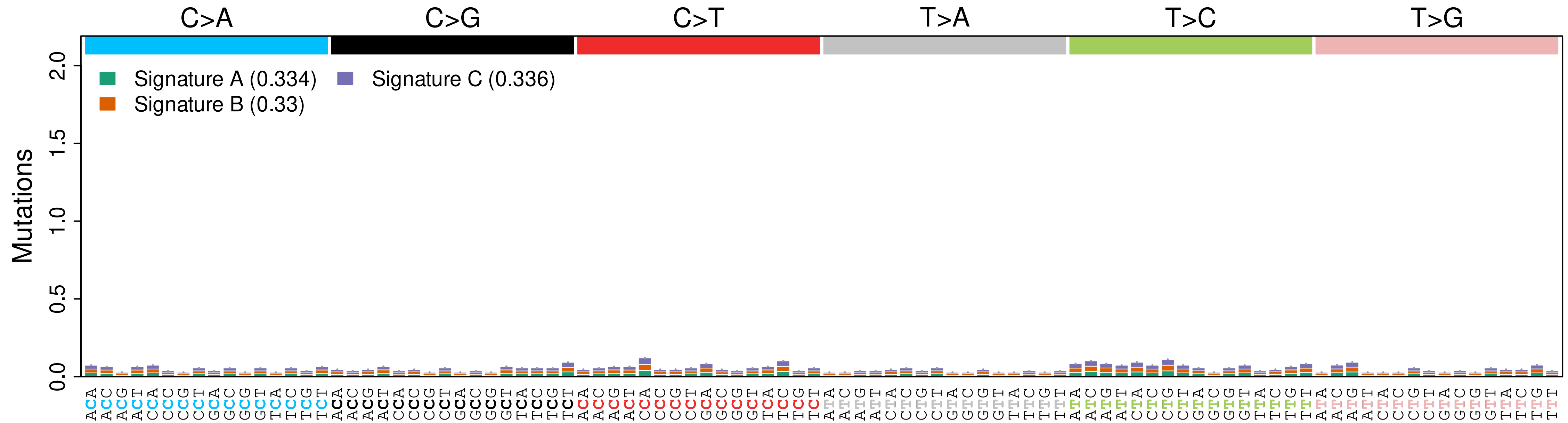
Reconstructed spectrum (cosine similarity = 0.308)

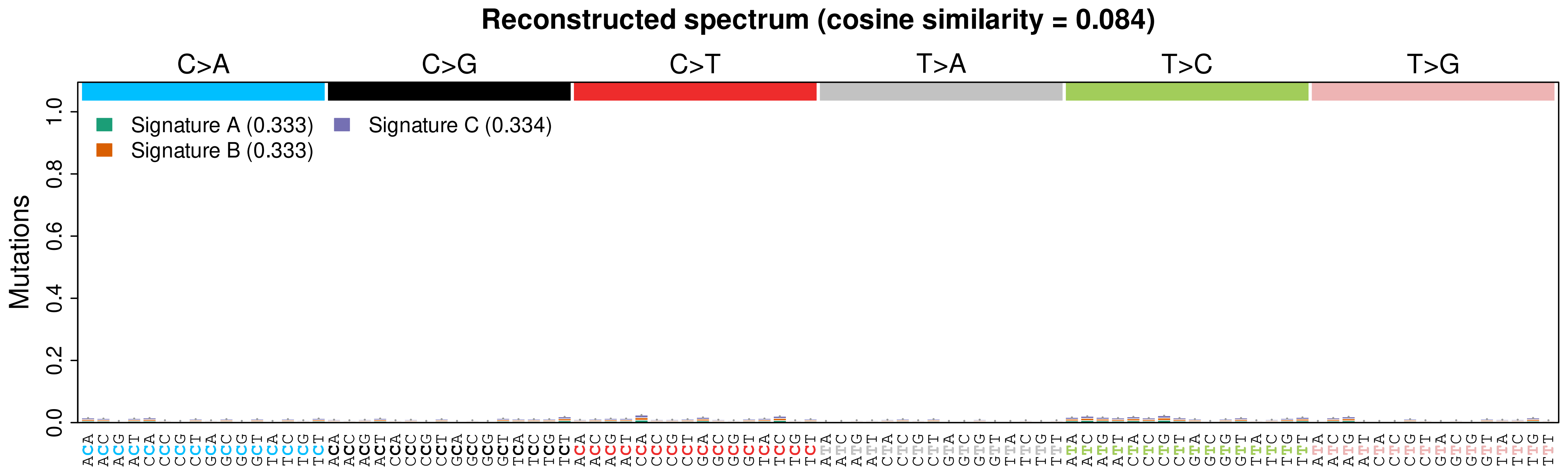
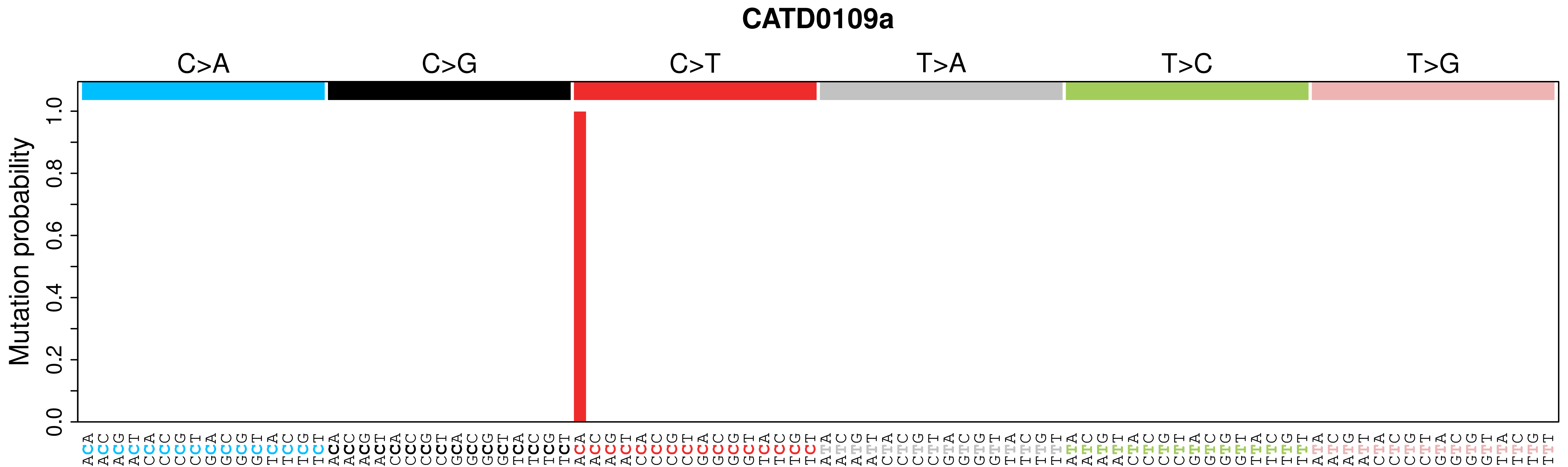


### CATD190a (4 mutations)

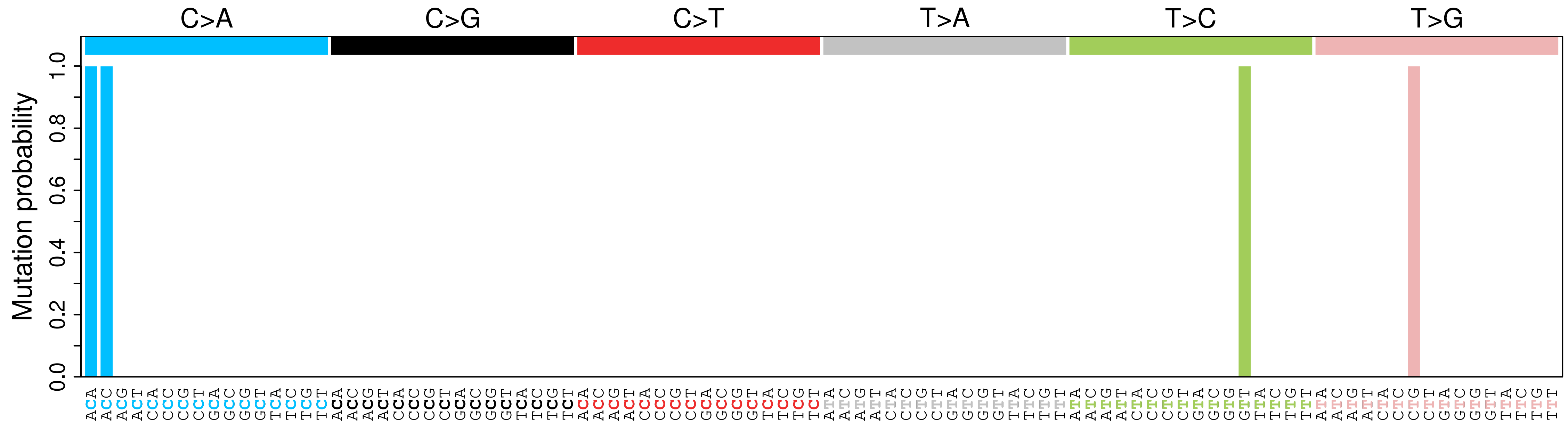


### Reconstructed spectrum (cosine similarity = 0.267)

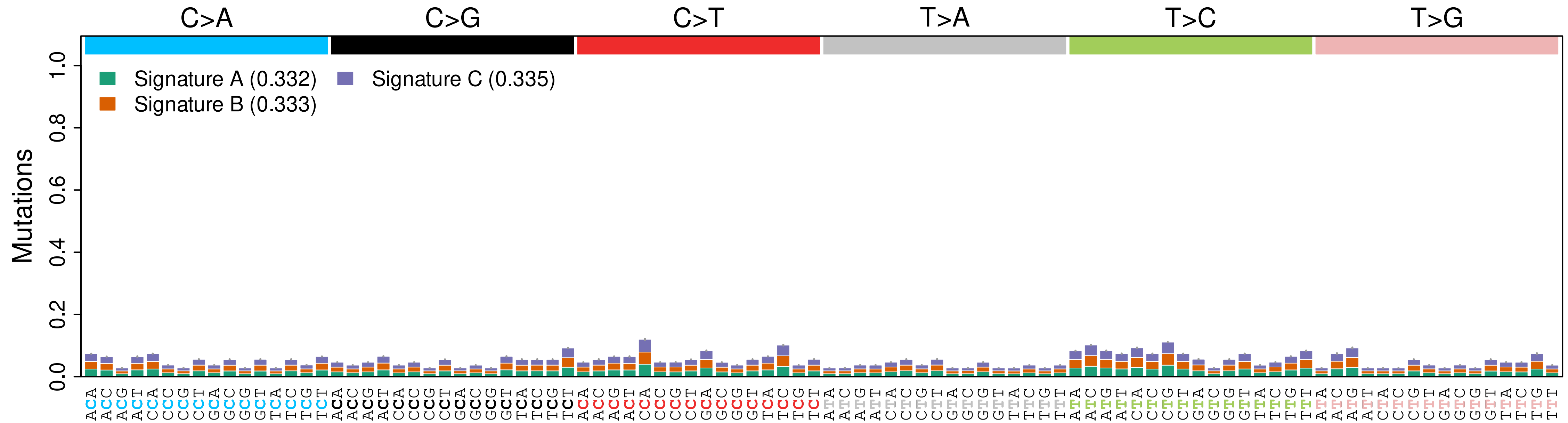




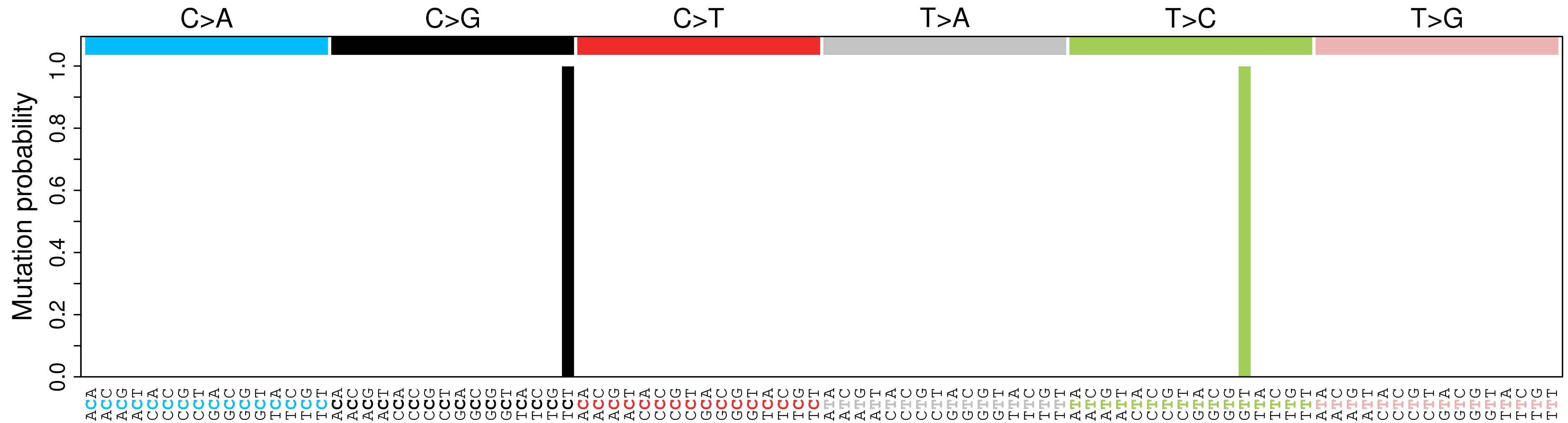
**CATD0415a**



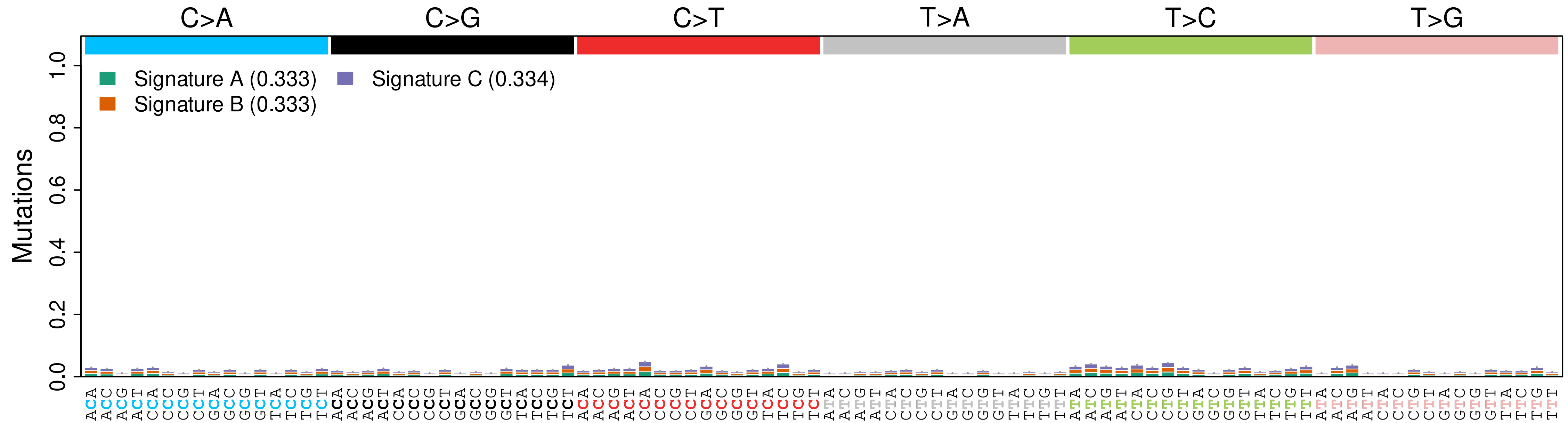
### Reconstructed spectrum (cosine similarity = 0.243)



# CATD191a

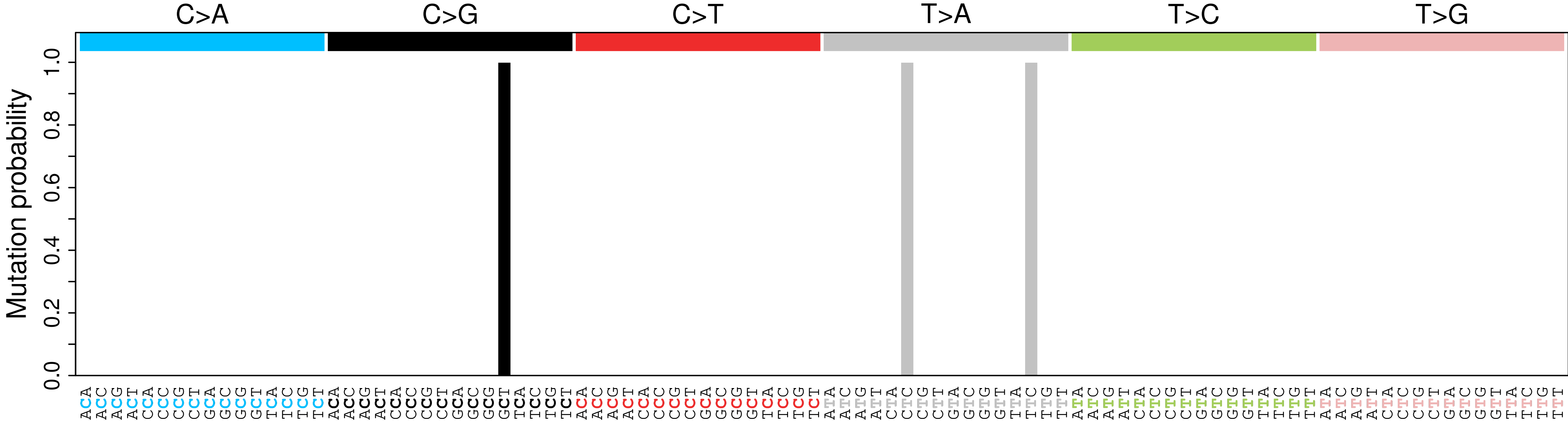


### Reconstructed spectrum (cosine similarity = 0.213)

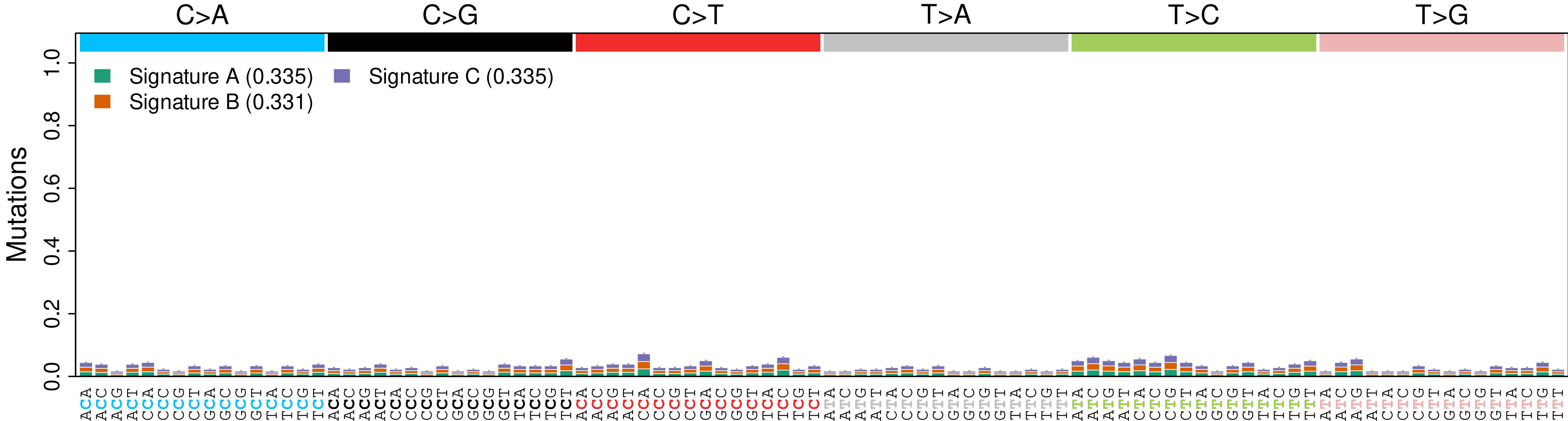




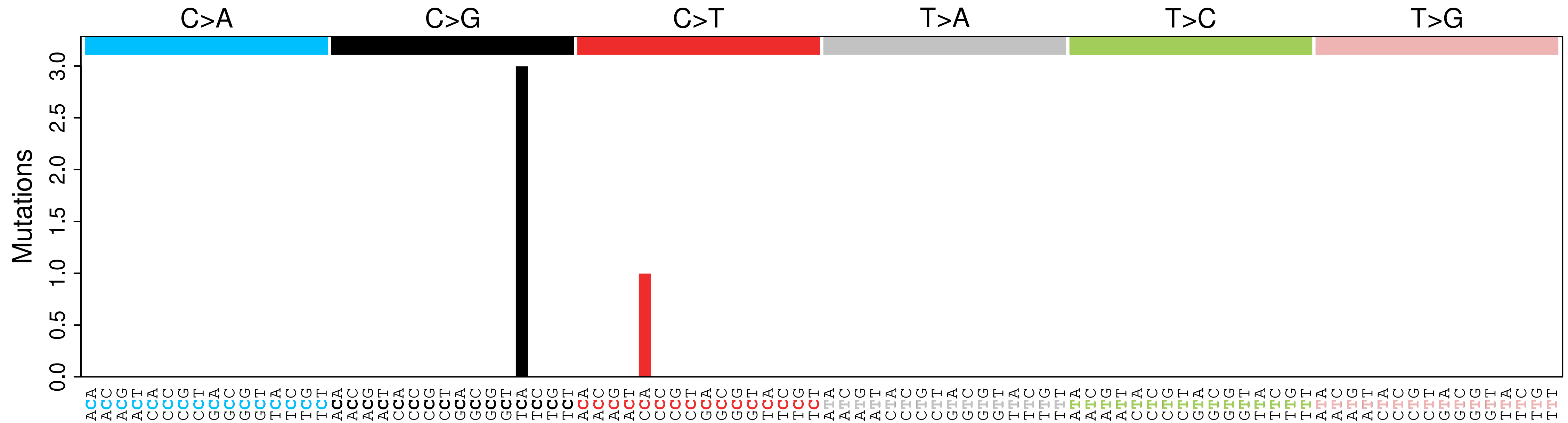
CATD0093a



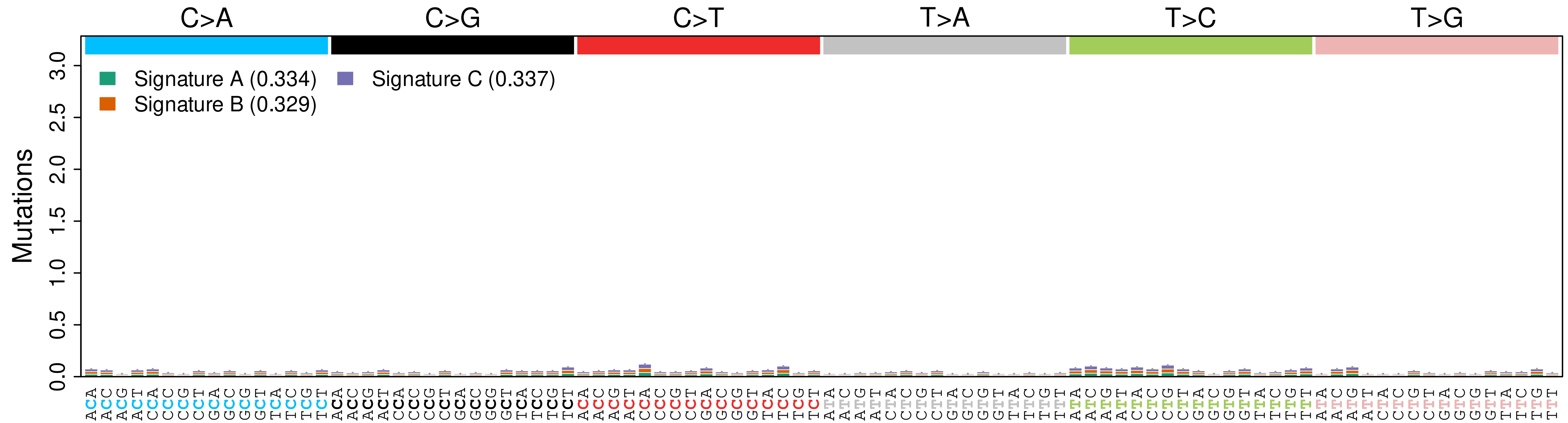
Reconstructed spectrum (cosine similarity = 0.166)



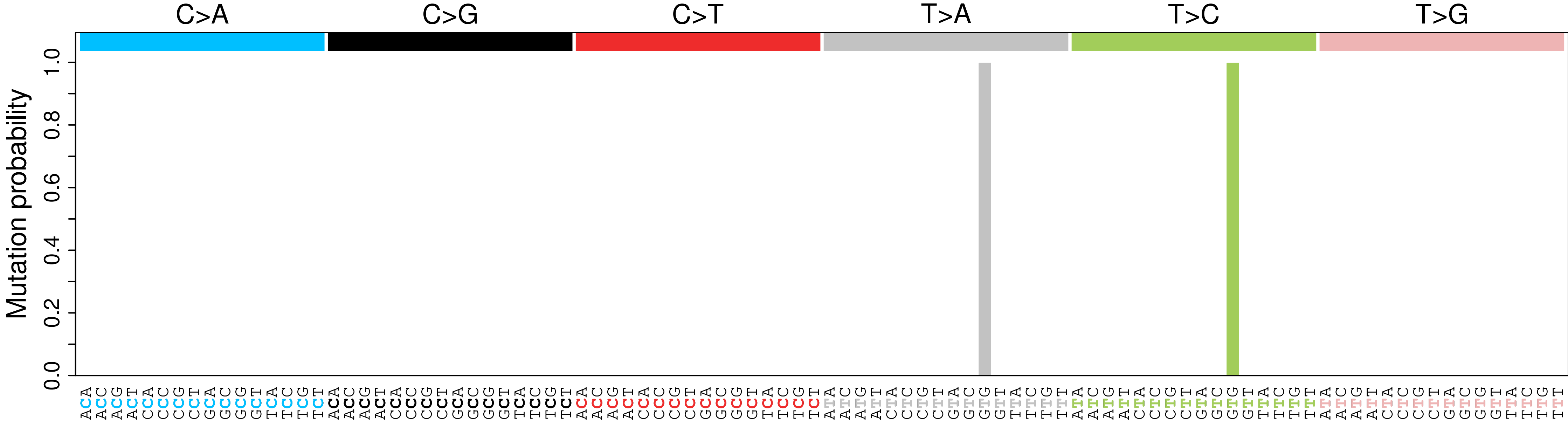
### CATD0407a (4 mutations)



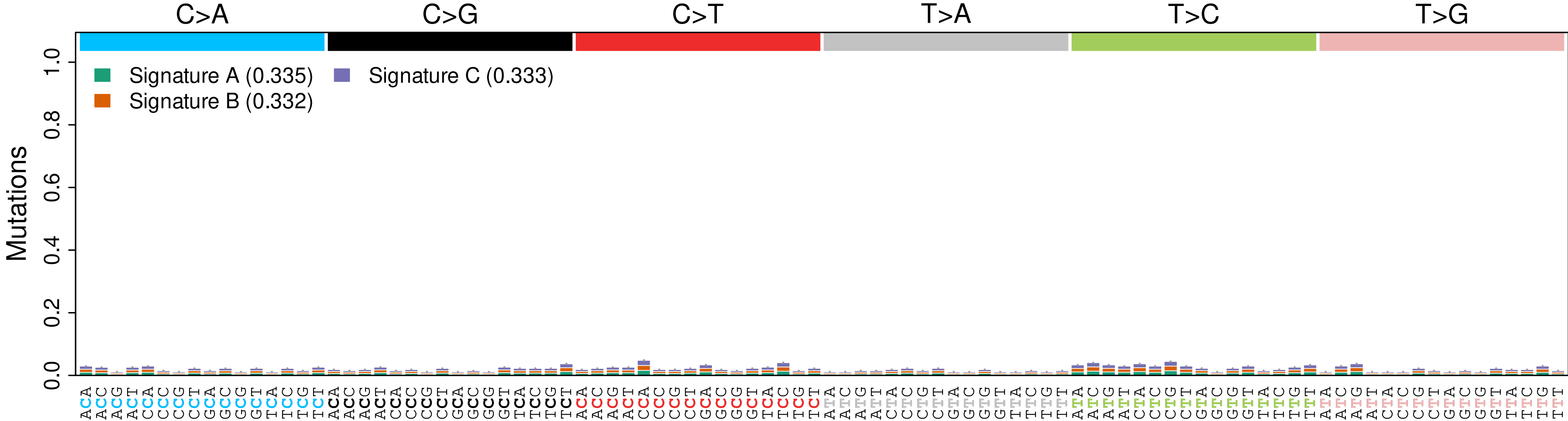
### Reconstructed spectrum (cosine similarity = 0.165)



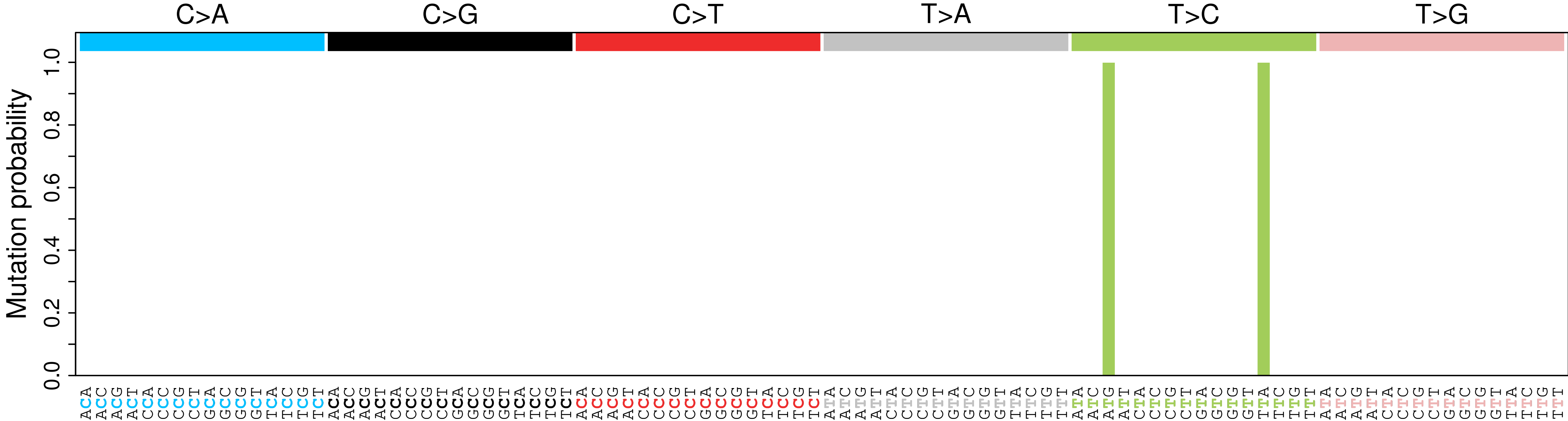
CATD0413a



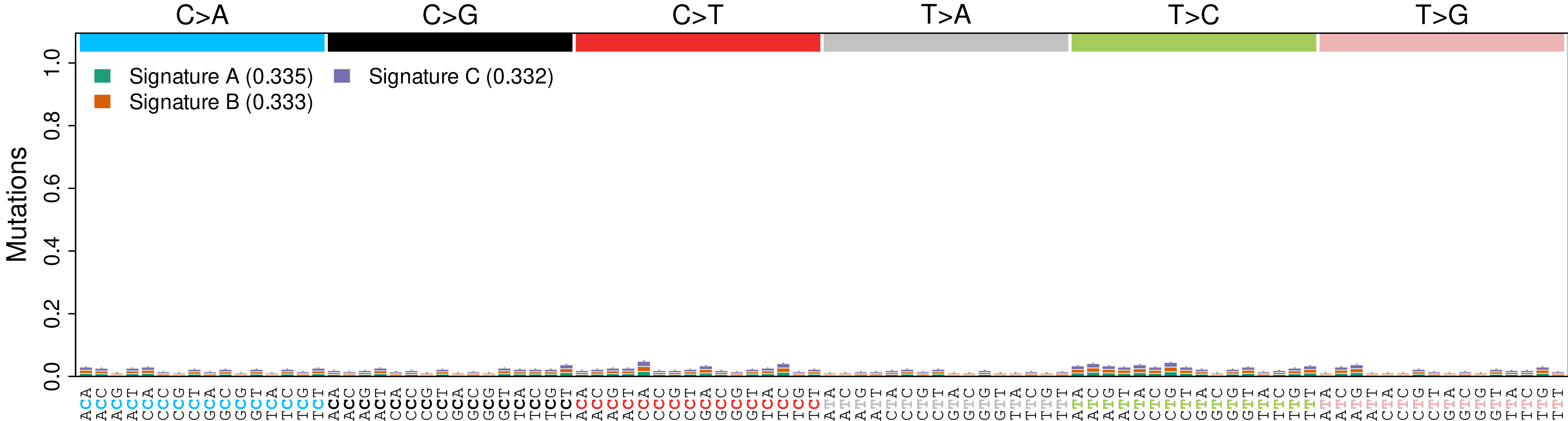
Reconstructed spectrum (cosine similarity = 0.131)



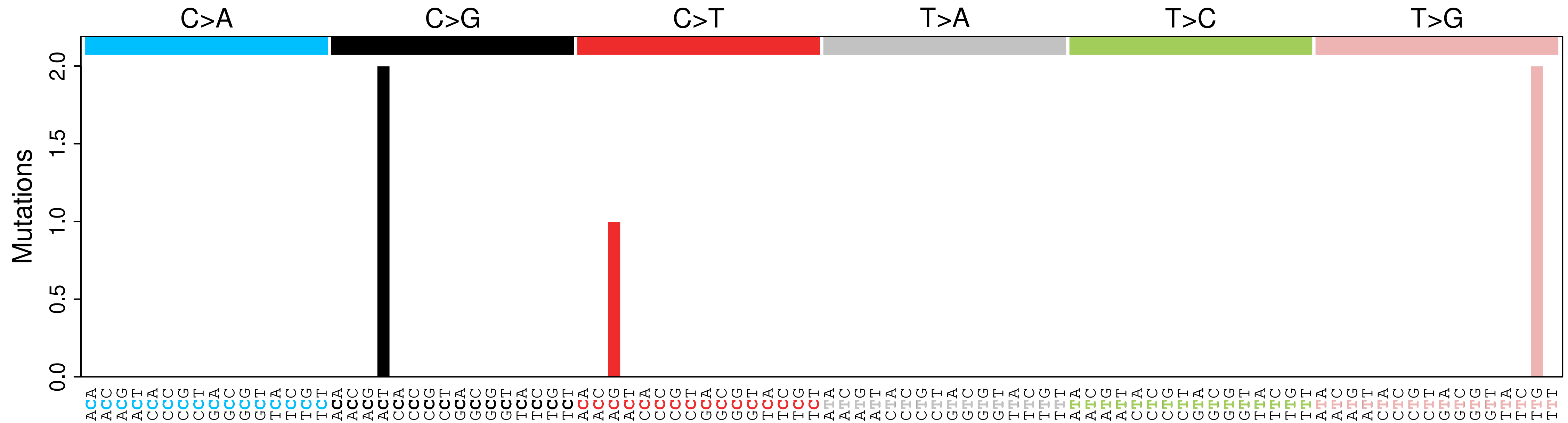
CATD0104a



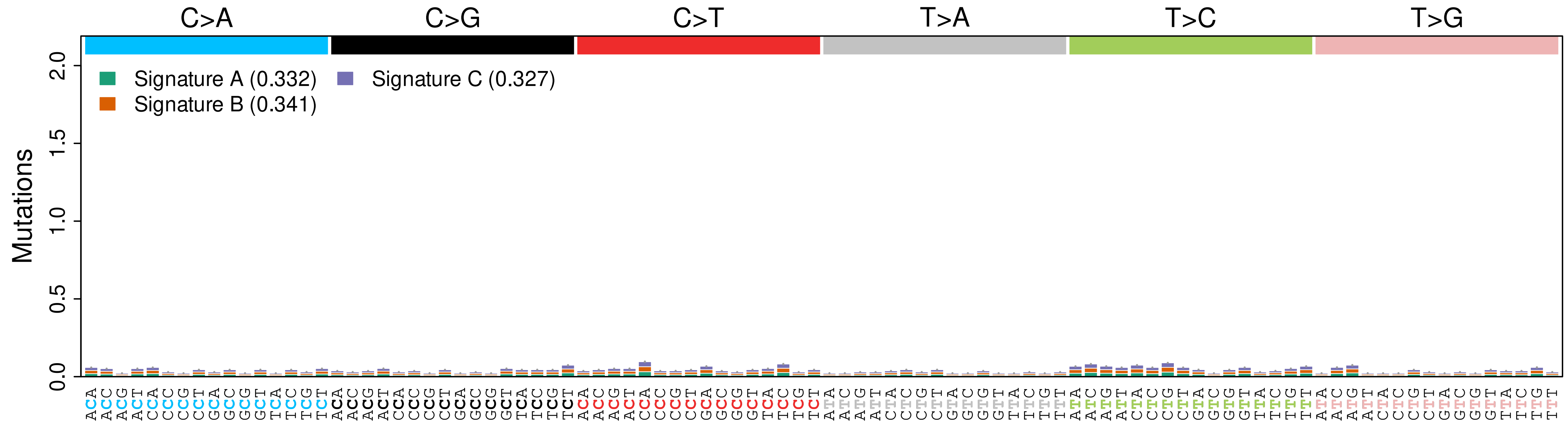
Reconstructed spectrum (cosine similarity = 0.155)



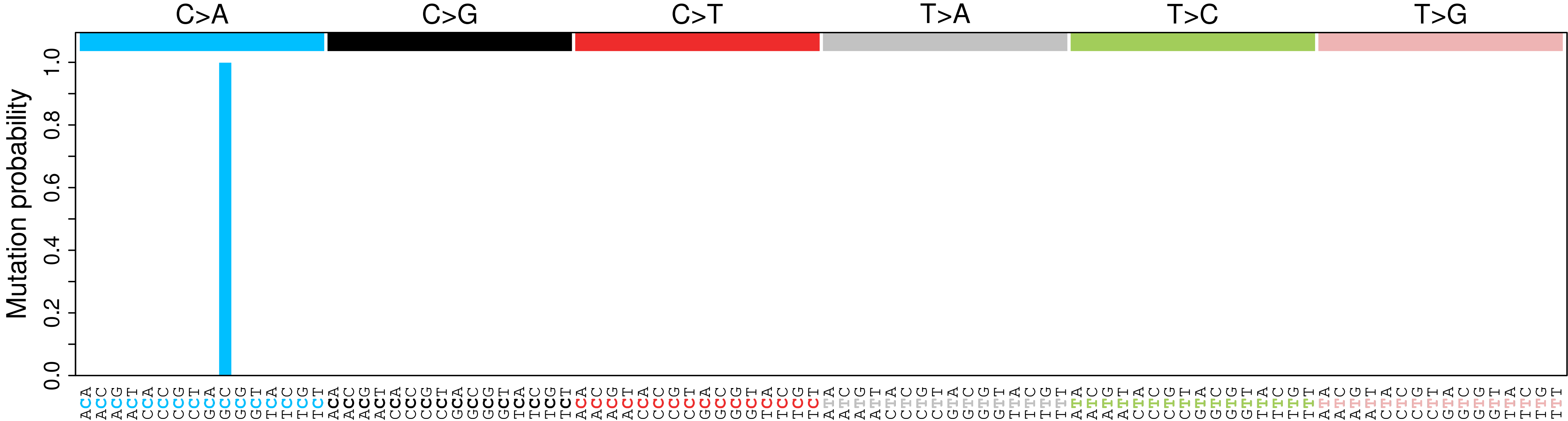
### CATD0409a (5 mutations)



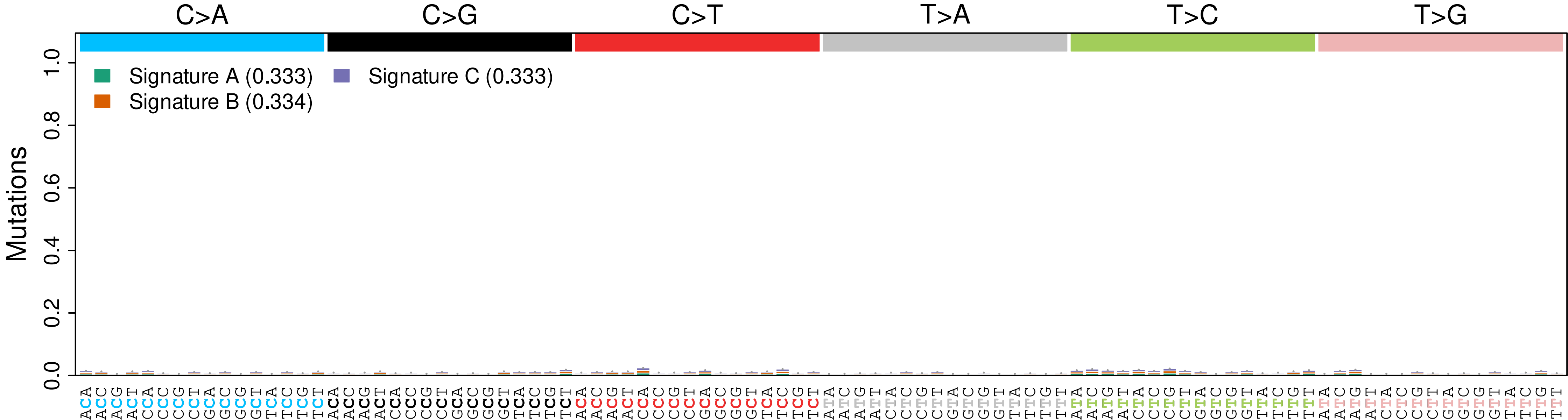
### Reconstructed spectrum (cosine similarity = 0.208)



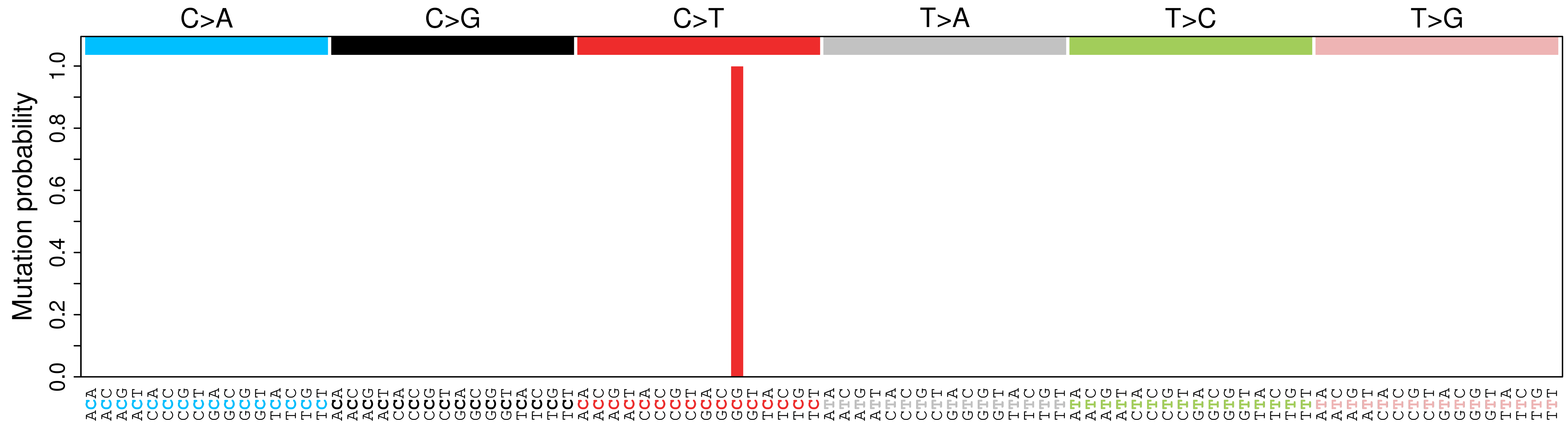
CATD0116a



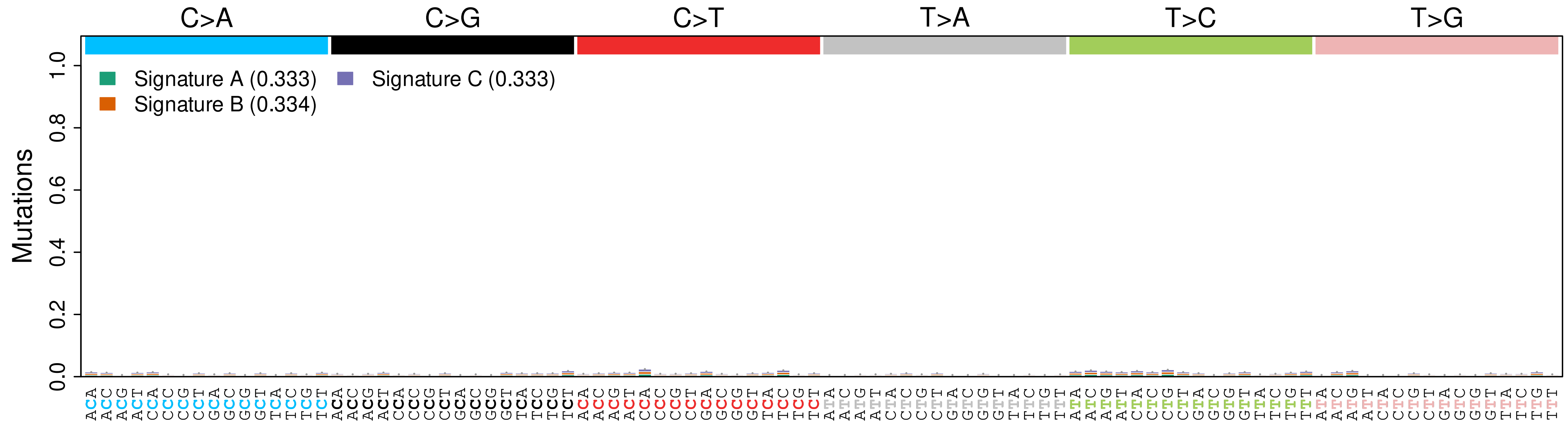
Reconstructed spectrum (cosine similarity = 0.101)



**CATD0406a**

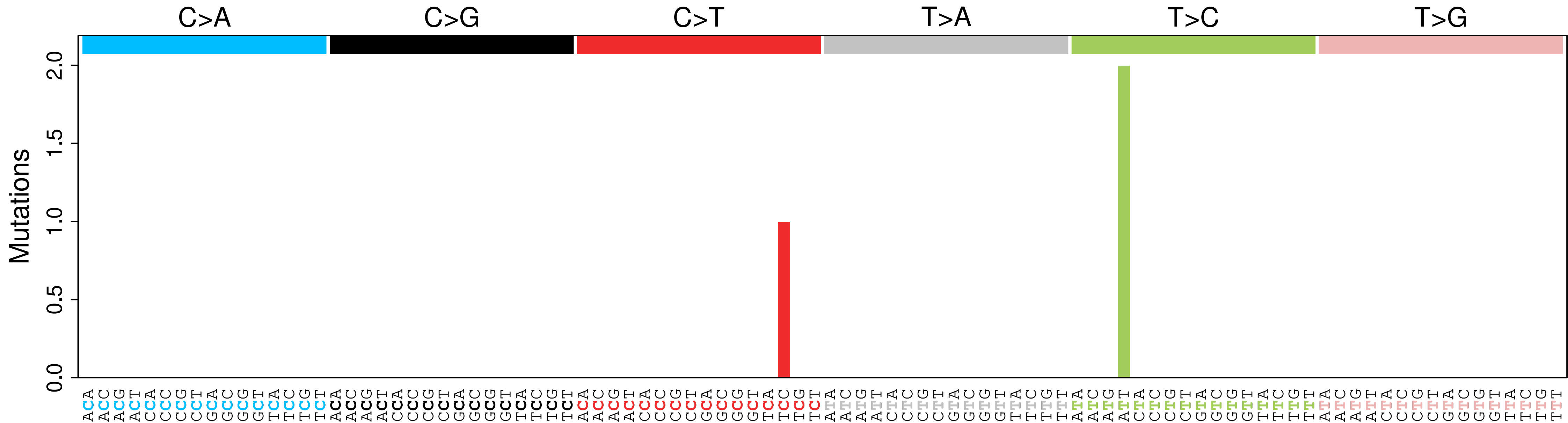


### Reconstructed spectrum (cosine similarity = 0.068)

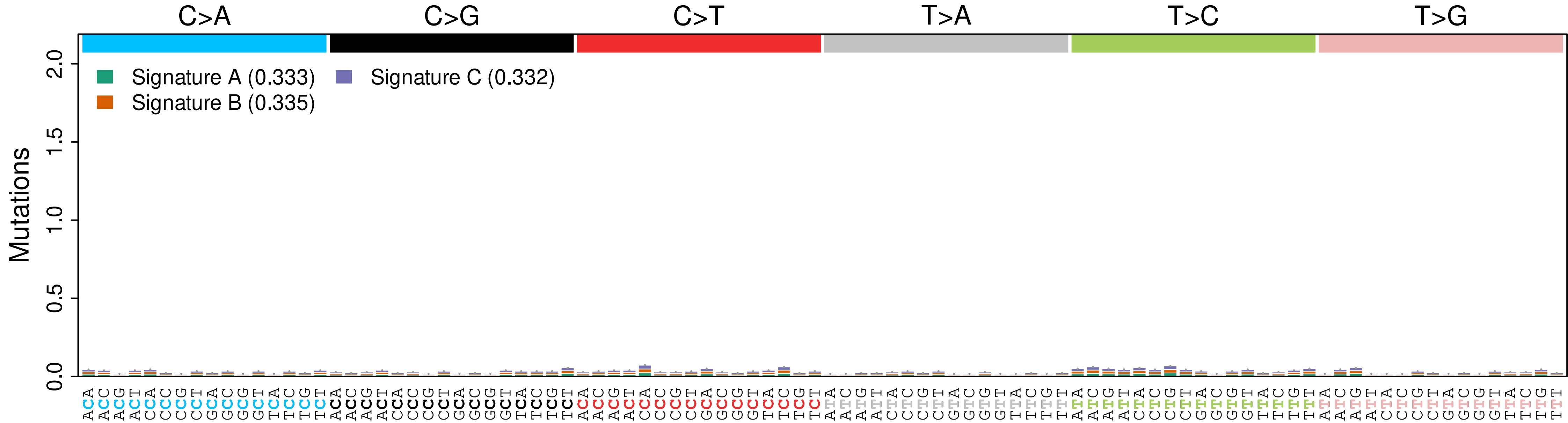




CATD0089a (3 mutations)



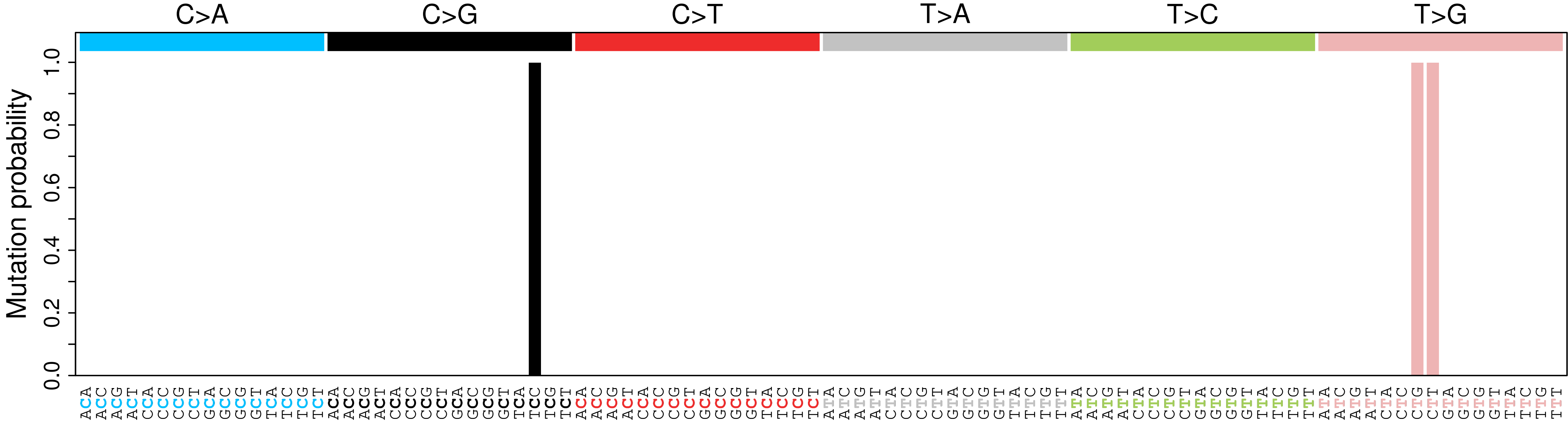
Reconstructed spectrum (cosine similarity = 0.202)



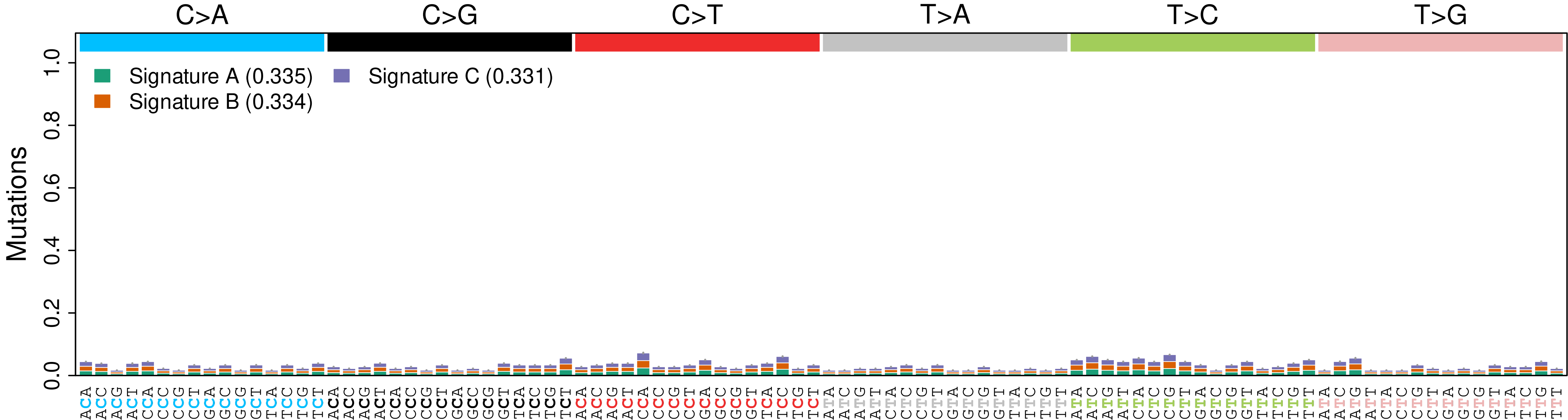




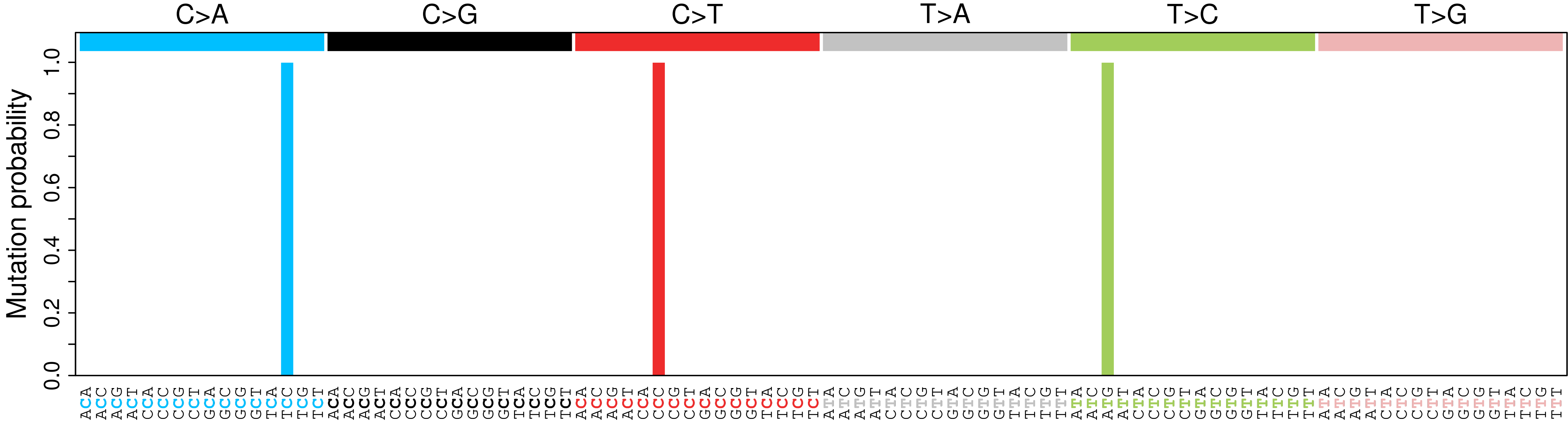
CATD0402a



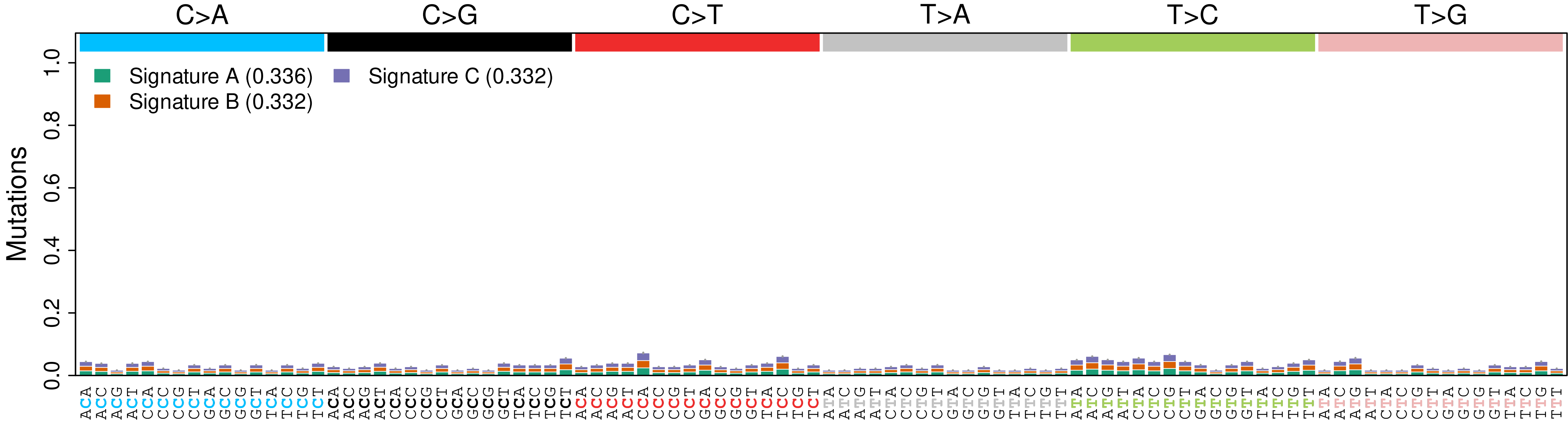
Reconstructed spectrum (cosine similarity = 0.156)



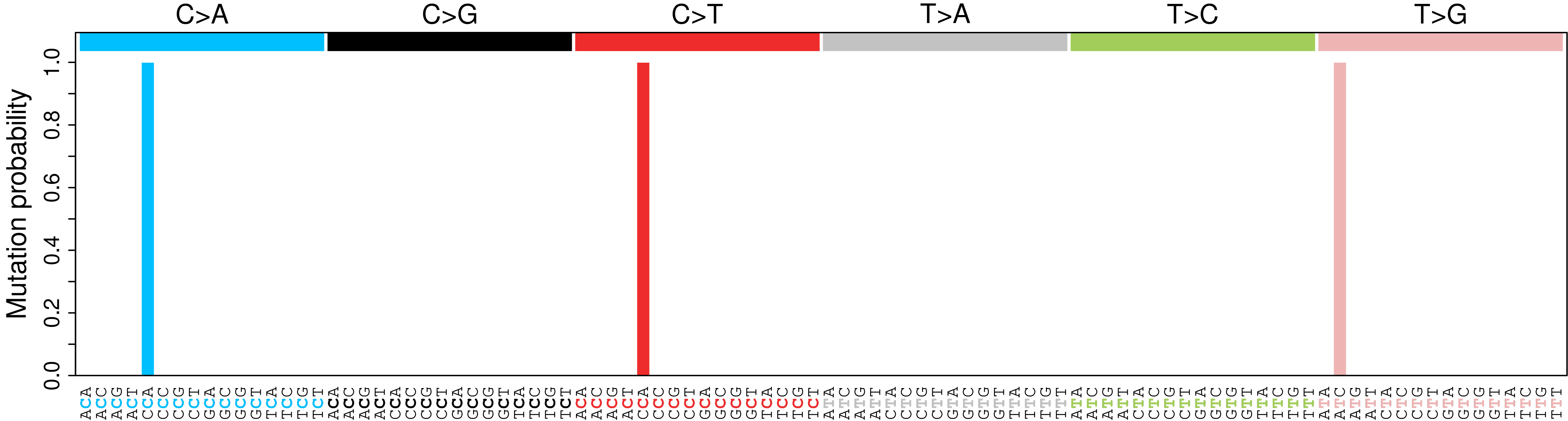
CATD0404a



Reconstructed spectrum (cosine similarity = 0.194)



CATD0408a



Reconstructed spectrum (cosine similarity = 0.281)

