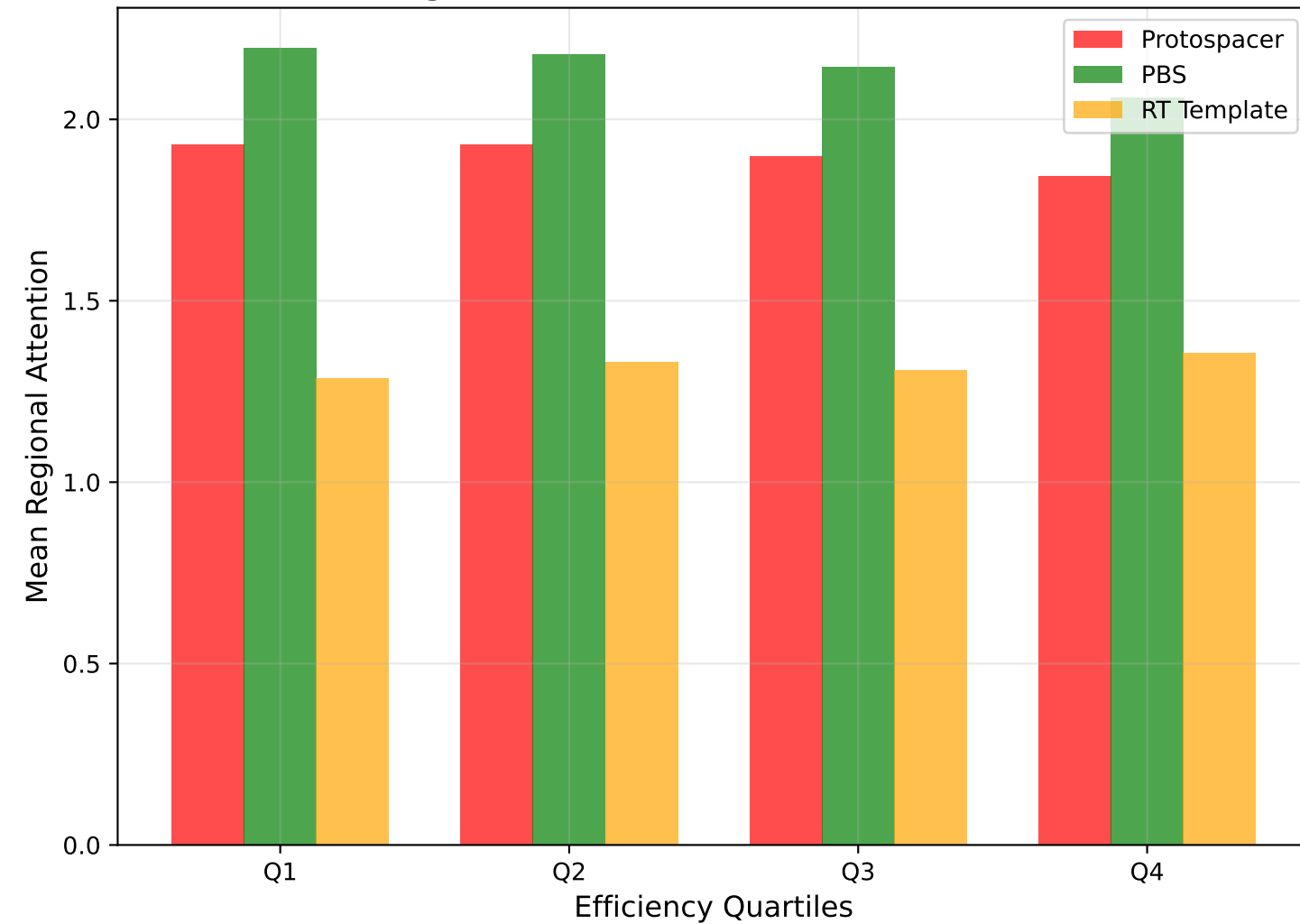
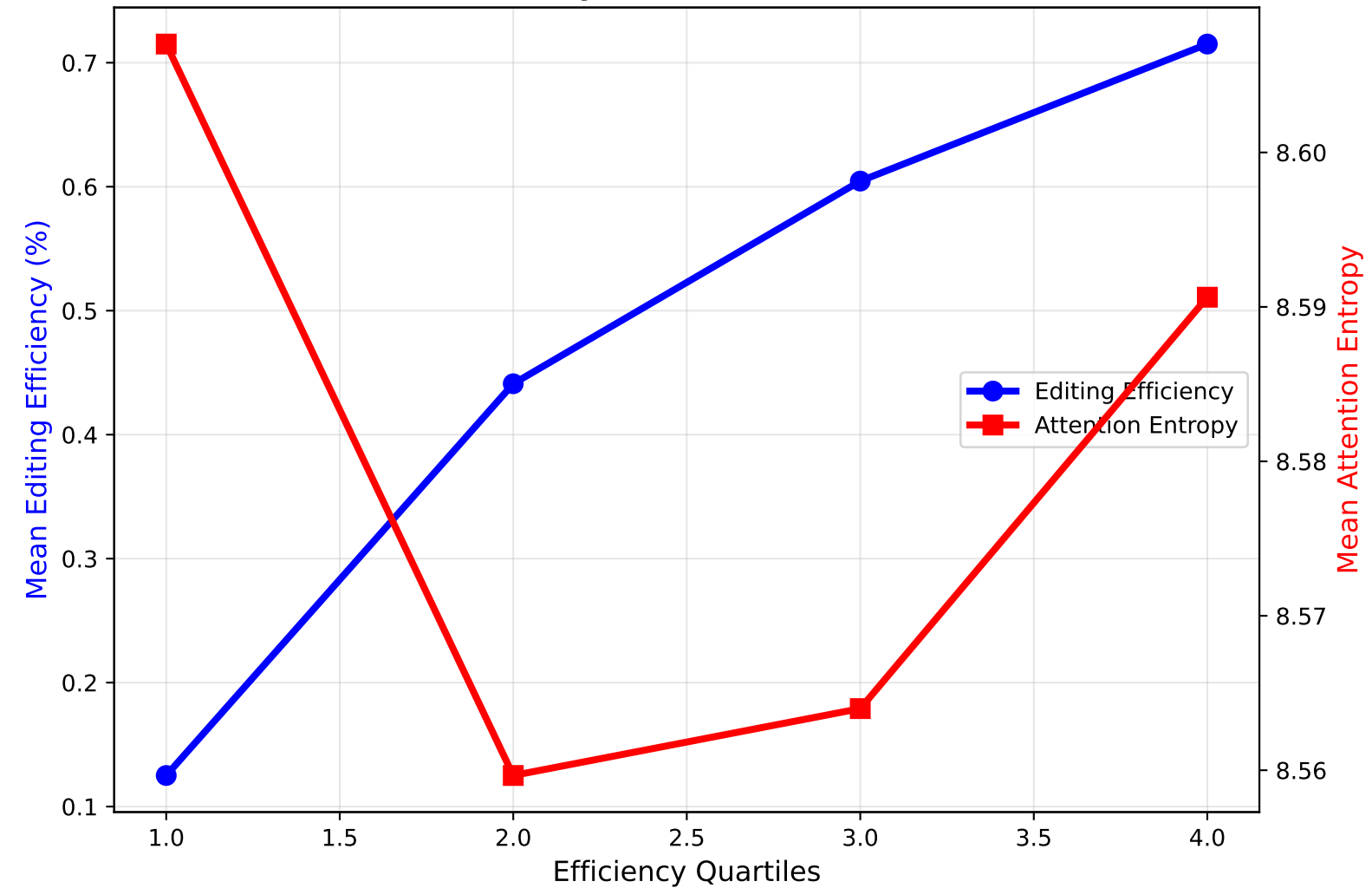


Detailed Quartile Analysis: Attention Patterns by Editing Efficiency

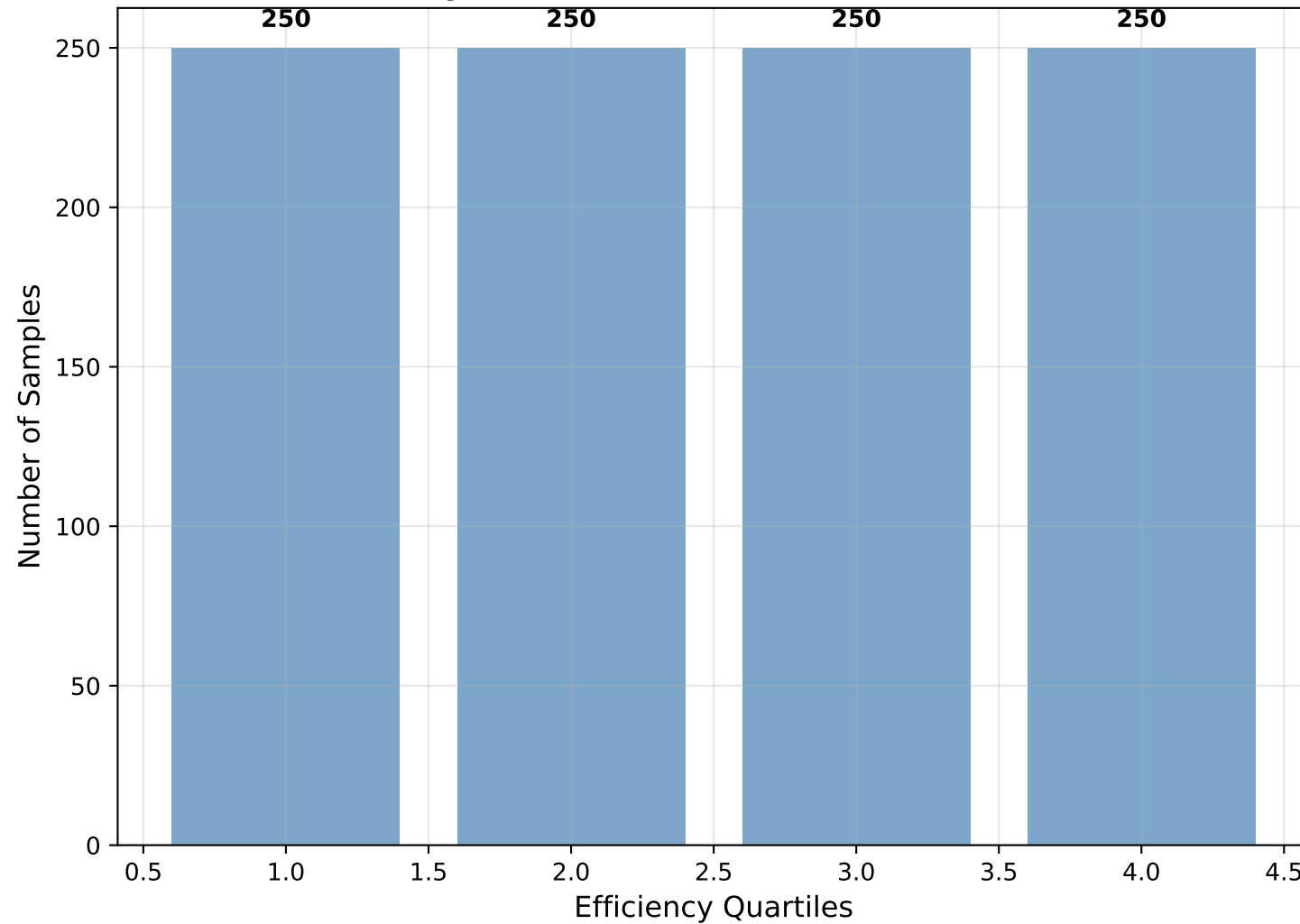
Regional Attention Across Quartiles



Efficiency vs Attention Focus



Sample Distribution Across Quartiles



KEY BIOLOGICAL INSIGHTS

- ✓ RT Attention ↔ Higher Efficiency ($p = +0.106$)
Model focuses MORE on editing template regions for successful prime edits
- ✗ Protospacer Attention ↔ Lower Efficiency ($p = -0.113$)
Model focuses MORE on target recognition for difficult/unsuccessful sequences
- ✗ PBS Attention ↔ Lower Efficiency ($p = -0.103$)
Model focuses MORE on primer binding site for challenging sequences
- Attention Entropy ↔ Lower Efficiency ($p = -0.038$)
More FOCUSED attention correlates with better editing outcomes

CONCLUSION: crispaIPE has learned biologically meaningful attention strategies!