

uMeltSM
PROBES



USER GUIDE | DNA.UTAH.EDU

uMelt Probes


- Software to aid in developing assays and predicting unlabeled probe melting profiles
 - Provides
 - Matched T_m
 - Mismatched T_m
 - Absolute T_m Difference
 - Melting Profiles
 - Flexible inputs
 - Buffer components
 - Data download
 - Chart export (.png)

More Information on Unlabeled Probes

- Zhou L, Myers AN, Vandersteen JG, Wang L, Wittwer CT: **Closed-tube genotyping with unlabeled oligonucleotide probes and a saturating DNA dye.** *Clin Chem* 2004, **50**(8):1328-1335.
- <http://www.ncbi.nlm.nih.gov/pubmed/15166111>


Interface

- Input
 - Placement of 'x' identifies variant location on template strand
- Push 'Analyze' to calculate

Probe Sequence	GC Content 35%
TTAGTTATTTTCAGCATCAAGGTC AATCAATAAAGT×GTAGTTCCAG	
Position 13 / 23 bp	Base Change
	<input type="text" value="C/A"/> ▾
<input type="button" value="Analyze"/>	


Interface

- Input
 - Template is auto populated based on probe input and displayed beneath probe (light gray)

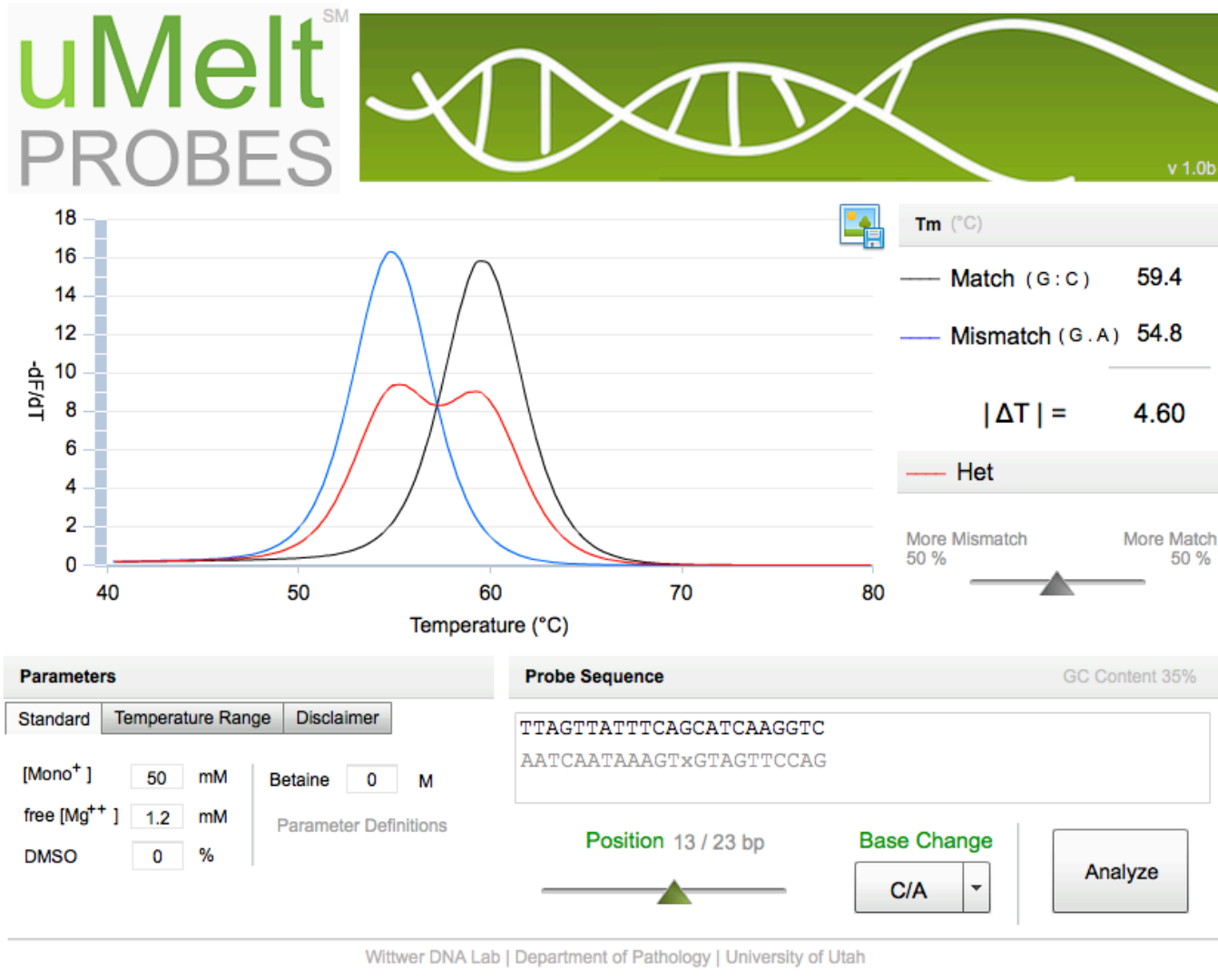
Probe Sequence	GC Content 35%		
<pre>TTAGTTATTTTCAGCATCAAGGTC AATCAATAAAGT×GTAGTTCCAG</pre>			
<p>Position 13 / 23 bp</p> 	<p>Base Change</p> <table border="1"><tr><td data-bbox="948 1090 1141 1182">C/A</td><td data-bbox="1141 1090 1193 1182">▼</td></tr></table> <p>Analyze</p>	C/A	▼
C/A	▼		

Interface

- Input
 - In this example, the matched probe will be G.C while the mismatch will be G.A based on x & y drop downs.

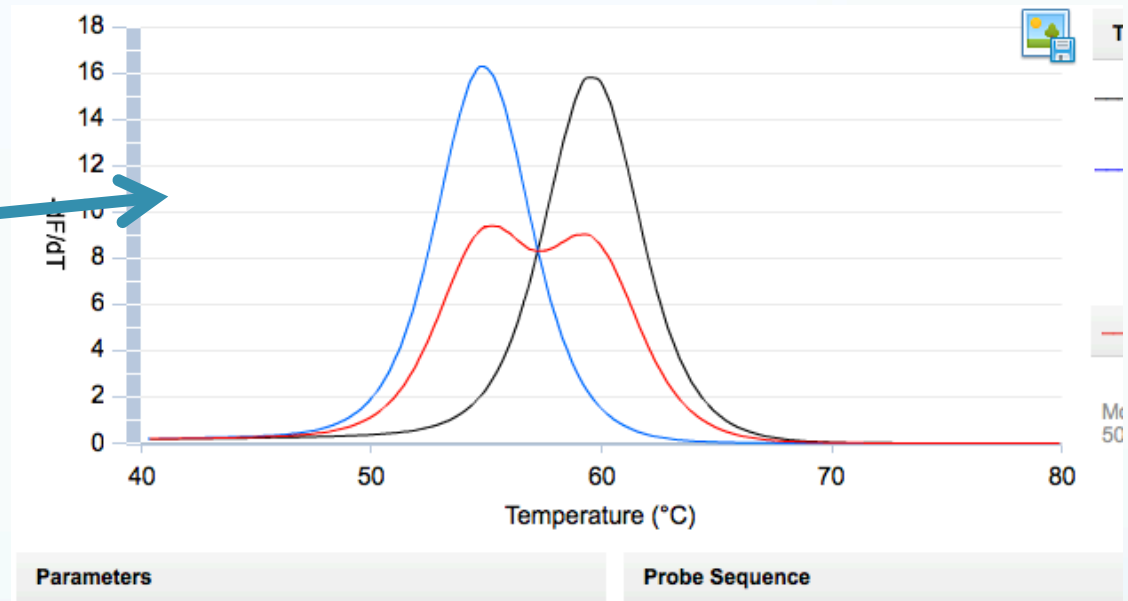
Probe Sequence	GC Content 35%	
TTAGTTATTTTCAGCATCAAGGTC AATCAATAAAGT×GTAGTTCCAG		
Position 13 / 23 bp	Base Change	Analyze
	C/A ▾	

Interface



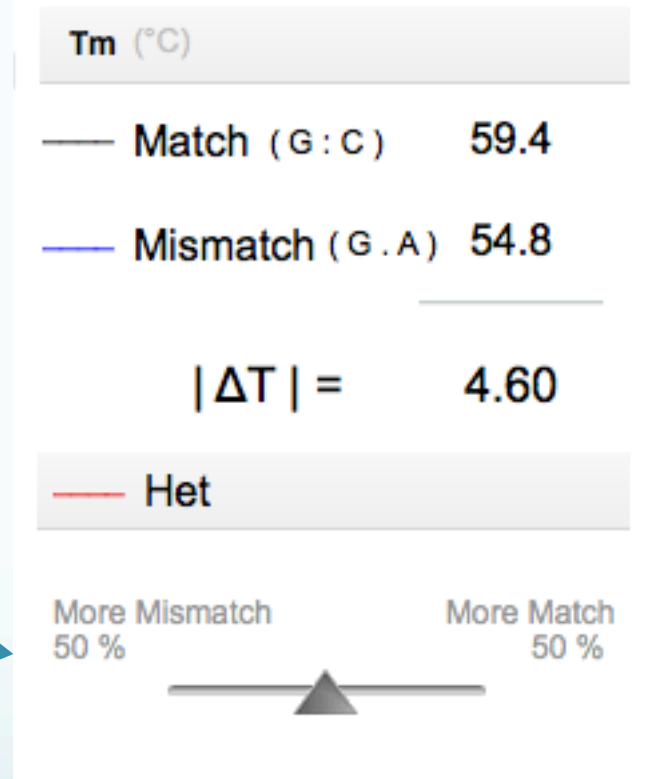
Interface

- Output
 - Melt curves ($-dF/dT$) are displayed with composite melt curve



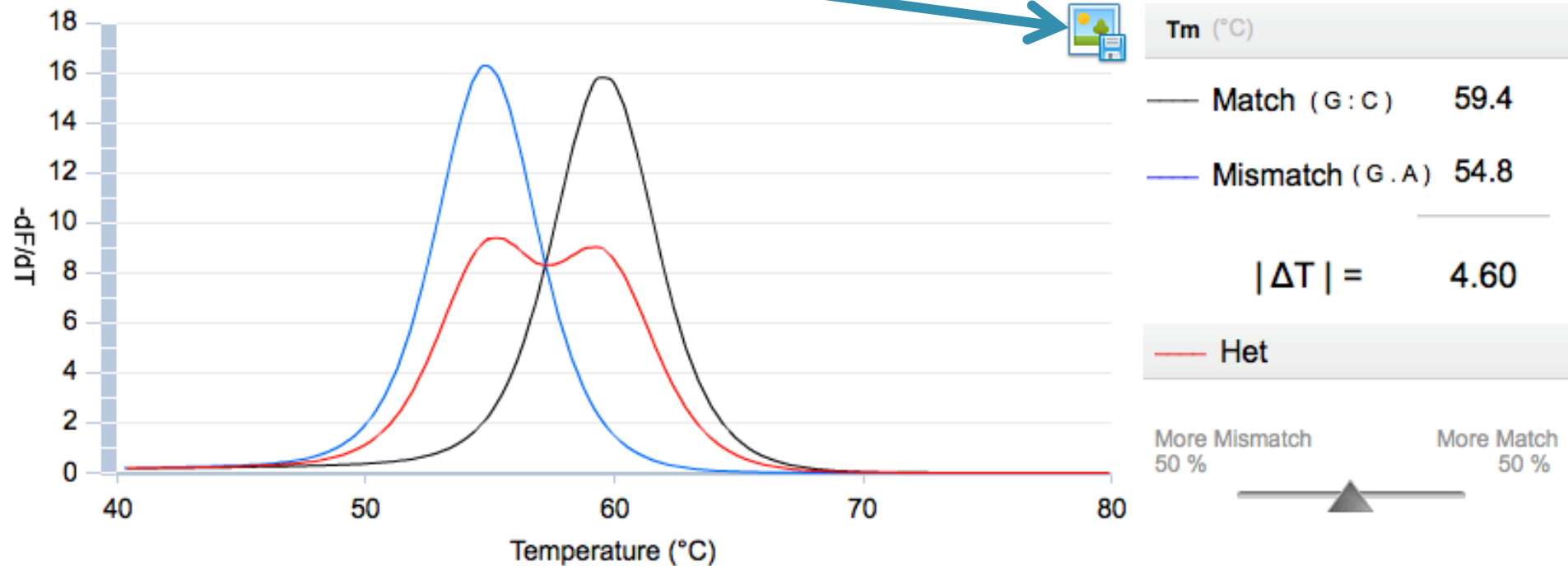
Interface

- Output
 - Melting temperature information is located to the right of the graph
 - Het shape may be altered by adjusting composite



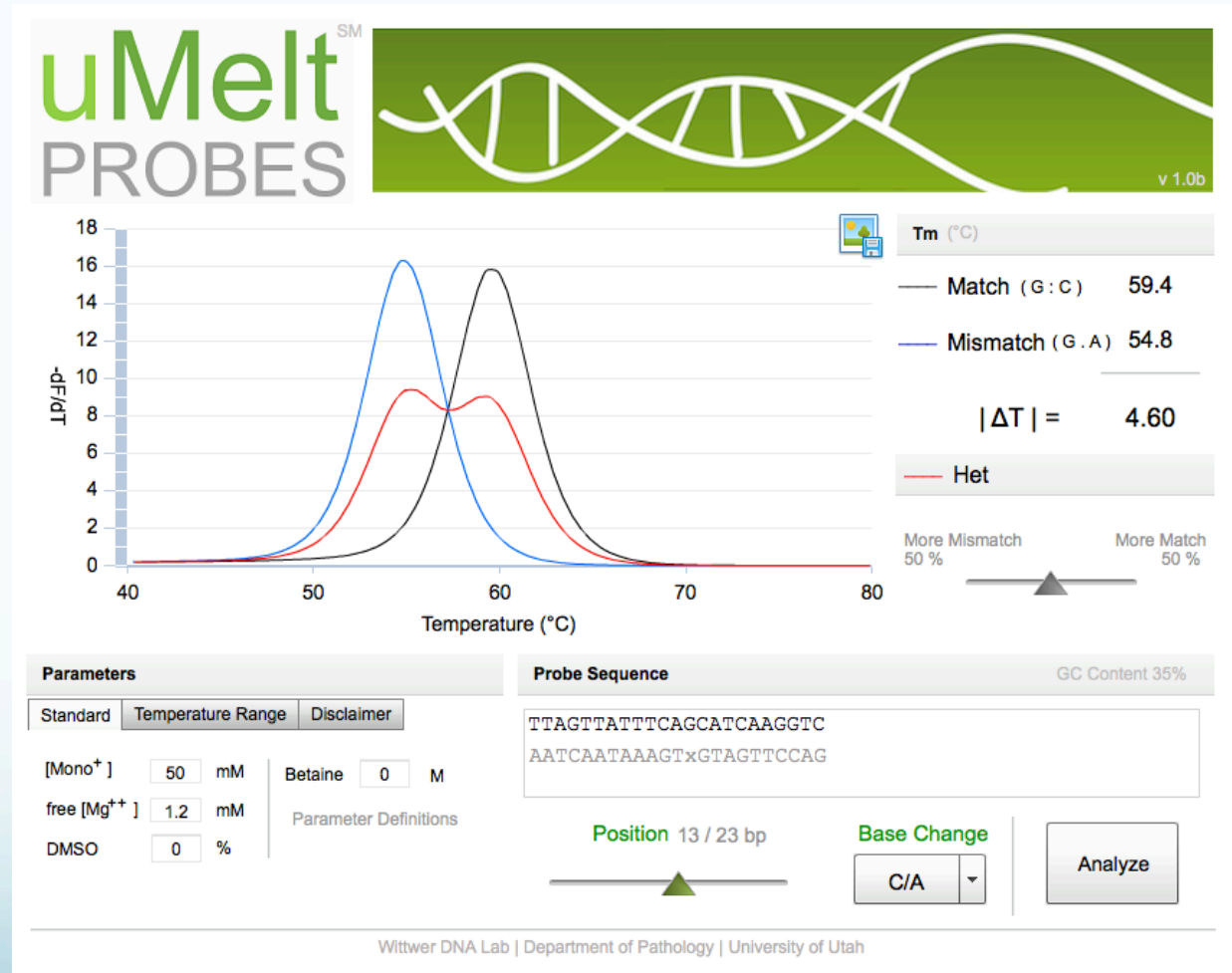
Interface

- Export
 - Users may export chart (.png)



Feedback

- User input is valuable in shaping our development priorities. Any feedback may be sent to zach.dwight[at]path.utah.edu



Software Philosophy

- DNA.UTAH.EDU
 - Software is free to use, without requirement of registration
 - However, please respect our work and cite our publications or software in manuscripts, presentations, or posters

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