melt
R.A usage and output \$2022-09-08\$

```
library(MeltR)
library(tidyverse)
## -- Attaching packages -
                                                          --- tidyverse 1.3.1 --
                     v purrr 0.3.4
## v ggplot2 3.3.6
                     v dplyr 1.0.9
## v tibble 3.1.7
                     v stringr 1.4.0
## v tidyr
           1.2.0
## v readr 2.1.2
                     v forcats 0.5.1
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()
                   masks stats::lag()
devtools::load_all()
## i Loading meltR.A.paper
df = df.absorbance %>% filter(Experiment == "CROWD DP5")
meltR.A(df,
       NucAcid = c("RNA", "ACCGGU"),
       Mmodel = "Homoduplex.2State",
       concT = 80,
       fitTs = c(20, 65))
## [1] "Individual curves"
## Sample
                  Ct
                            Η
                                  S G
## 1
       14 5.259360e-04 -55.61 -0.1570 -6.92 50.19
        15 7.161730e-05 -55.68 -0.1574 -6.87 42.62
## 2
## 3
       16 1.518661e-05 -59.44 -0.1685 -7.18 38.77
## 4
        18 3.077518e-04 -44.85 -0.1238 -6.45 47.45
## 5
        19 4.351600e-05 -53.15 -0.1492 -6.86 40.95
## 6
        20 9.795616e-06 -69.96 -0.2029 -7.02 36.61
## 7
        22 1.509123e-04 -58.39 -0.1664 -6.79 44.41
        23 2.289100e-05 -51.80 -0.1446 -6.95 39.23
## 8
        24 6.984597e-06 -57.50 -0.1639 -6.67 33.54
## 9
## [1] "Summary"
                         H SE.H
                                       S SE.S
                                                   G SE.G Tm_at_0.1mM
##
               Method
## 1 1 individual fits -56.26 6.75 -159.30 21.34 -6.86 0.21 43.62
## 2 2 Tm versus ln[Ct] -58.24 3.50 -165.42 11.12 -6.93 0.07
                                                               43.85
        3 Global fit -53.58 0.48 -150.78 1.50 -6.82 0.02
                                                               43.74
## SE.Tm_at_0.1mM
## 1
              7.85
## 2
              3.95
## 3
              0.59
## [1] "fractional error between methods"
                      S
            Η
## 1 0.08317468 0.09236593 0.01601164
\#\# [1] "dH and dG are in kcal/mol and dS is in cal/mol/K. Tms are in deg Celsius"
```