density.default(x = mcmcsamples[, 3]^2)
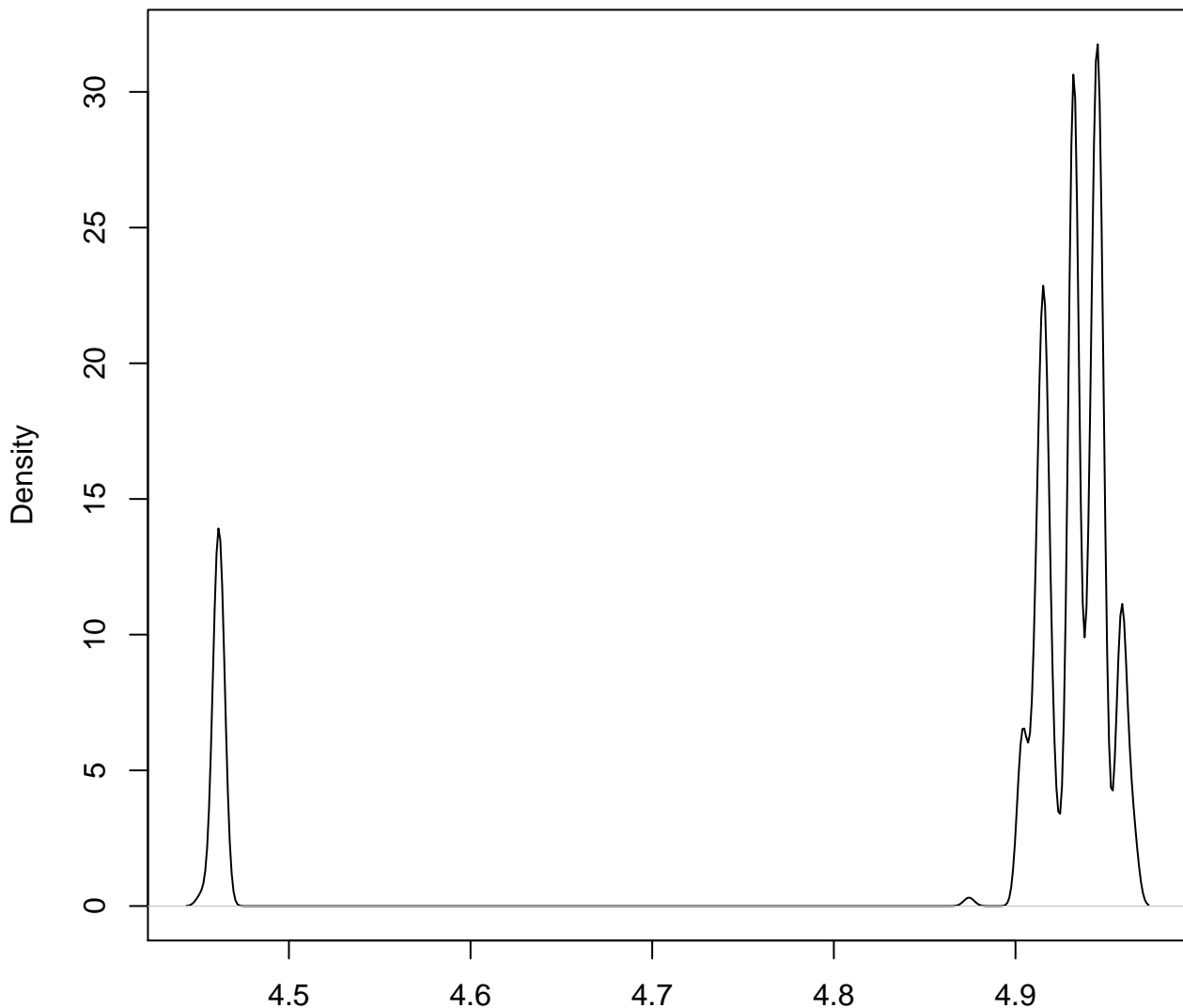
N = 20000   Bandwidth = 0.00284