

## Apple/Genentech BLAST for PowerMac G4/G5 Performance Data

The following graph compares the performance of *blastn* nucleotide searching, using both a dual 2 GHz PowerMac G5 and a dual 800 MHz PowerMac G4, for:

- A/G BLAST 2.2.9
- NCBI BLAST 2.2.9
- NCBI MegaBLAST 2.2.9

Note that A/G BLAST is designed to maintain sensitivity across arbitrary word sizes. Its roughly linear scaling of processing rate with nucleotide word size  $W$  enables it to overtake MegaBLAST in the region  $W > 20$  on the PowerMac G5.

Please note that relative performance is highly dependent on the database and queries used, as well as the amount of available memory. The database used is the nt.01 database from the NCBI FTP site as of October 8, 2003 (approx. 700 million base pairs). The query is the first three sequences from the mitochondrion DNA file mito.nt (also from NCBI FTP site) and is approx. 45K base pairs total. The tests were run with an expectation value of "-e 1.0e-8" to filter out less significant matches.

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**BLAST Performance**

