Molecular diagnosis based on gene expression profiling has been indispensable and essential examination for individualized cancer treatment especially for brain tumor including glioblastoma. Gene chip analysis and exome sequencing are recently utilized for this purpose, although these approaches are still far from hospital-level routine laboratory examination because of their demand of highly advanced techniques and excessive cost. Here we established an immunohistochemical molecular profiling analysis to obtain the protein expression profile of multiple receptor tyrosine kinases (RTKs). We performed immunostaining of 63 cases of glioblastoma and quantitated the expression levels of EGFR (epidermal growth factor receptor), PDGFR-alpha (platelet-derived growth factor receptor alpha) and cMET in tumor cells. Based on the analogical heat map analysis of immunohistochemistry, all 63 cases were categorized into 4 subgroups of MET-high, EGFR-high, PDGFR-alpha-high and RTK-int/low. Interestingly, survival analysis revealed that MET-high and RTK-high groups showed significantly unfavorable prognosis compared to the other groups. This is the first report to demonstrate the immunohistochemical molecular profiling combined with heat map technique, and we indicates that our method is worthy for the personalized diagnosis as a routine laboratory examination especially for glioblastoma patients.