



# Genomic Antibody Technology™

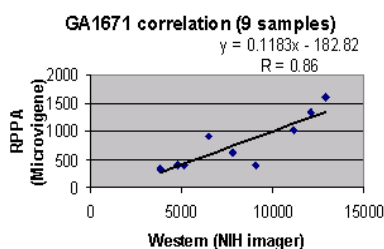
## Application Note

### ANALYSIS OF COMT EXPRESSION IN BREAST CANCER

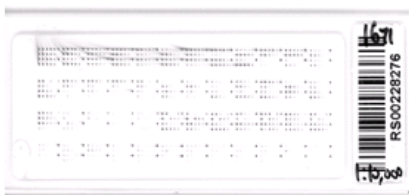
Affinity purified polyclonal antibodies produced by Genomic Antibody Technology™ in rabbits were used in collaboration with MD Anderson Cancer Center to study the expression of proteins related to breast cancer. In the presented study, six breast cancer cell lines were used to examine the expression of two isoforms (28kDa and 30 KDa) of Catechol-O-Methyltransferase (COMT).

The use of 1:10,000 GAT COMT antibody on Reverse Phase Protein Array (*Figure 2*) indicates the expression of COMT. Expression was confirmed using Western Blot (*Figure 3*). The data from RPPA and WB shows high correlation (*Figure 1*,  $R=0.86$ ), indicating high sensitivity of the GAT COMT antibody in both RPPA and WB.

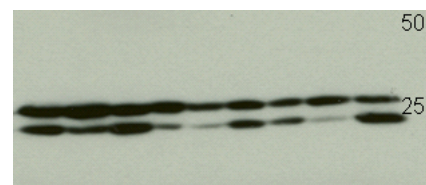
**Figure 1:**



**Figure 2:**

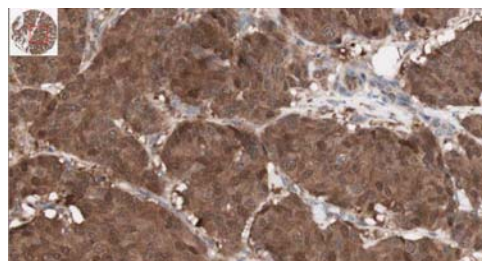


**Figure 3:**



GAT COMT was also used in collaboration with Human Protein Atlas (HPA). In the presented study, biopsies from normal female breast tissue (*Figure 4*) and female breast cancer tissue (*Figure 5*) were used to compare the expression of COMT.

IHC staining with the GAT COMT antibody shows a marked increase in expression of COMT protein in breast cancer patients compared to normal female breast tissue.



**Figure 4:** Normal Female Breast Tissue

**Figure 5:** Breast Cancer Patient Tissue

Brown color indicates presence of protein, blue color shows nuclei.