

Basic Information

Product Name	Anti-ABAT Antibody		
Gene Name	ABAT		
Source	Rabbit		
Isotype	IgG		
Species Reactivity	human, mouse, rat		
Tested Application	WB, ICC/IF, FCM		
Contents	500 ug/ml antibody with PBS , 0.02% NaN ₃ , 1 mg BSA and 50% glycerol.		
Immunogen	E. coli-derived human ABAT recombinant protein (Position: K388-K500). Human ABAT shares 93.9% and 94.5% amino acid (aa) sequence identity with mouse and rat ABAT, respectively.		
concentration	500 ug/ml		
Purification	Immunogen affinity purified.		
Observed MW	54KD		
Dilution Ratios	Western blot(WB): 1:500-2000 ICC/IF: 1:50-1:200 Flow cytometry (FCM):1-3 µg/1x10 ⁶ cells		

Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

4-Aminobutyrate aminotransferase is a protein that in humans is encoded by the ABAT gene. ABAT is responsible for catabolism of gamma-aminobutyric acid (GABA), an important, mostly inhibitory neurotransmitter in the central nervous system, into succinic semialdehyde. The active enzyme is a homodimer of 50-kD subunits complexed to pyridoxal-5-phosphate. The protein sequence is over 95% similar to the pig protein. GABA is estimated to be present in nearly one-third of humans synapses. ABAT in liver and brain is controlled by 2 codominant alleles with a frequency in a Caucasian population of 0.56 and 0.44. The ABAT deficiency phenotype includes psychomotor retardation, hypotonia, hyperreflexia, lethargy, refractory seizures, and EEG abnormalities. Multiple alternatively spliced transcript variants encoding the same protein isoform have been found for this gene.

Selected Validation Data

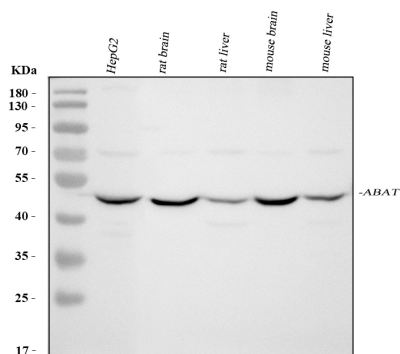


Figure 1. Western blot analysis of anti- ABAT antibody (PB1071). The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: HepG2 whole cell lysates,

Lane 2: rat brain tissue lysates,

Lane 3: rat liver tissue lysates,

Lane 4: mouse brain tissue lysates,

Lane 5: mouse liver tissue lysates.

Use rabbit anti- ABAT 1:1000, probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002). A specific band was detected for ABAT at approximately 54KD. The expected band size for ABAT is at 54KD.

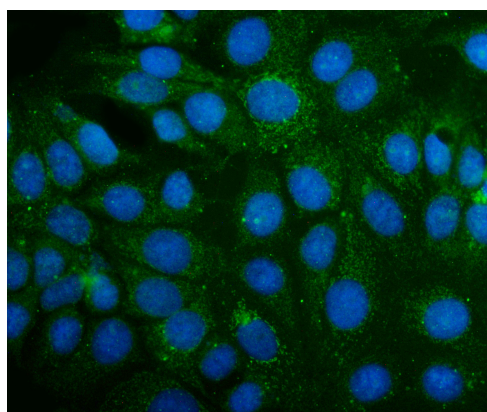


Figure 2. ICC analysis using anti-ABAT antibody (PB1071). was detected in immersion fixed MCF-7 cell line. Cells were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green)(Catalog # BA1127) and counterstained with DAPI (blue).

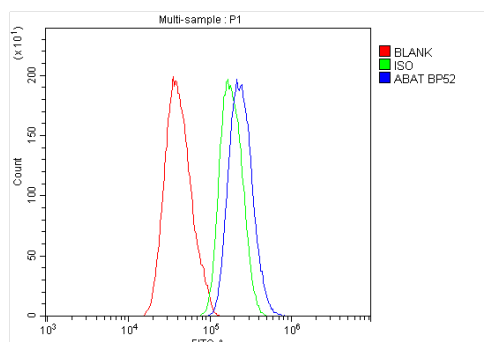


Figure 3. Flow cytometry analysis of Caco-2 cell (1x10⁶) DyLight 488 conjugated goat anti- rabbit IgG(blue) was used as secondary antibody. Isotype control antibody (Green line) was rabbit IgG DyLight 488. Unlabelled sample (Red line).