

## Basic Information

Product Name	Anti-ABAT Antibody
Gene Name	ABAT
Source	Rabbit
Clonality	Polyclonal
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, ICC/IF, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN <sub>3</sub> , 1 mg/ml 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	54 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 ICC/IF: 1:50-1:200 Flow Cytometry (Fixed):1:50-200

## Storage

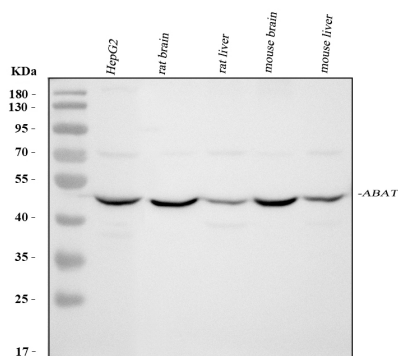
12 months from date of receipt, -20°C as supplied.

## 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



Western blot analysis of ABAT using anti-ABAT antibody (PB1071).

The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: HepG2 whole cell lysates,

Lane 2: rat brain tissue lysates,

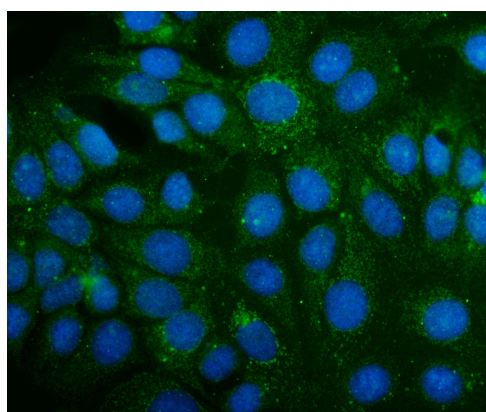
Lane 3: rat liver tissue lysates,

Lane 4: mouse brain tissue lysates,

Lane 5: mouse liver tissue lysates.

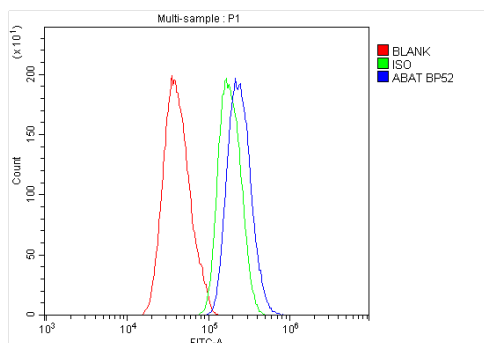
After electrophoresis, proteins were transferred to a membrane.

Then the membrane was incubated with rabbit anti-ABAT antigen affinity purified polyclonal antibody (PB1071) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for ABAT at approximately 54 kDa. The expected band size for ABAT is at 56 kDa.



ICC/IF analysis of ABAT using anti-ABAT antibody (PB1071).

ABAT was detected in an immunocytochemical section of MCF-7 cells. The section was incubated with rabbit anti-ABAT Antibody (PB1071) at a dilution of 1:100. Fluoro488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of Caco-2 cells using anti-ABAT antibody (PB1071).

Overlay histogram showing Caco-2 cells stained with PB1071 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ABAT Antibody (PB1071) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.