

Basic Information

Product Name	Anti-TPH1 Antibody	
Gene Name	TPH1	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human	
Tested Application	WB, IHC, ICC/IF, FCM, ELISA	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	E. coli-derived human Tryptophan Hydroxylase/TPH1 recombinant protein (Position: K383-I444). Human TPH1 shares 77.4% and 82.3% amino acid (aa) sequence identity with mouse and rat TPH1, respectively.	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	51 kDa	
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 Enzyme linked immunosorbent assay (ELISA): 1:100-1000 (Boiling the paraffin sections in 10mM citrate buffer, pH6.0, or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

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

Tryptophan hydroxylase 1 (TPH1) is an isoenzyme of tryptophan hydroxylase which in humans is encoded by the TPH1 gene. This gene encodes a member of the aromatic amino acid hydroxylase family. The encoded protein catalyzes the first and rate limiting step in the biosynthesis of serotonin, an important hormone and neurotransmitter. Mutations in this gene have been associated with an elevated risk for a variety of diseases and disorders, including schizophrenia, somatic anxiety, anger-related traits, bipolar disorder, suicidal behavior,

addictions, and others.

Selected Validation Data

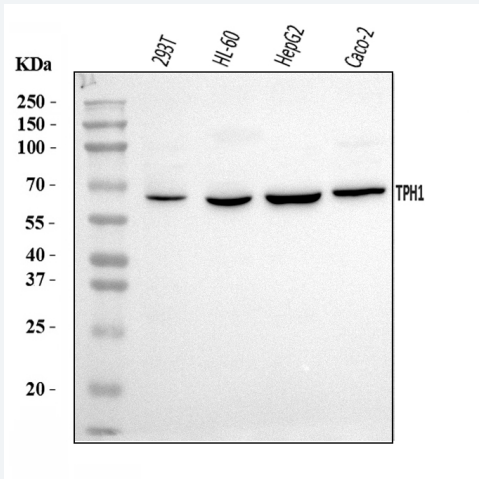


Figure 1. Western blot analysis of TPH1 using anti-TPH1 antibody (A01626-4). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: 293T whole cell lysates,

Lane 2: HL-60 whole cell lysates,

Lane 3: HepG2 whole cell lysates,

Lane 4: Caco-2 whole cell lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-TPH1 antigen affinity purified polyclonal antibody (A01626-4) 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 TPH1 at approximately 51 kDa. The expected band size for TPH1 is at 51 kDa.

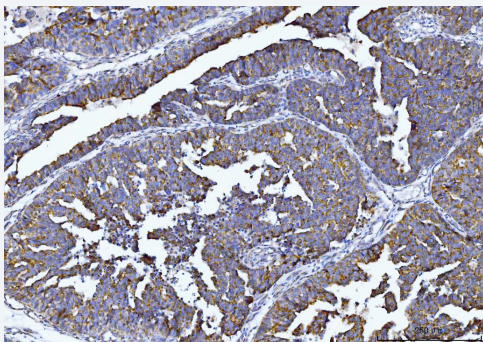


Figure 2. IHC analysis of TPH1 using anti-TPH1 antibody (A01626-4).

TPH1 was detected in a paraffin-embedded section of human Bladder epithelial carcinoma tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-TPH1 Antibody (A01626-4) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1022) as the chromogen.

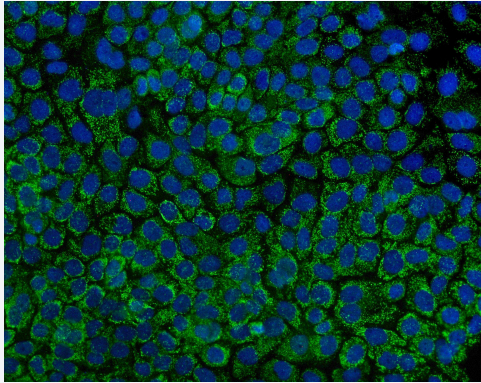


Figure 5. IF analysis of TPH1 using anti-TPH1 antibody (A01626-4).

TPH1 was detected in an immunocytochemical section of A431 cells. The section was incubated with rabbit anti-TPH1 Antibody (A01626-4) at a dilution of 1:100. DyLight®488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).

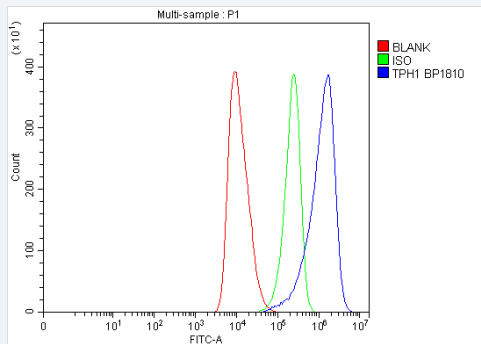


Figure 6. Flow Cytometry analysis of HEL cells using anti-TPH1 antibody (A01626-4).

Overlay histogram showing HEL cells stained with A01626-4 (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-TPH1 Antibody (A01626-4) at 1:100 dilution for 30 min at 20°C. DyLight®488 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.