

## Basic Information

Product Name	Anti-CHAT Antibody	
Gene Name	CHAT	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human, mouse, rat	
Tested Application	WB, IHC, ICC/IF, FCM, ELISA	
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 Choline Acetyltransferase/CHAT recombinant protein (Position: T25-K731).	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	83 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.

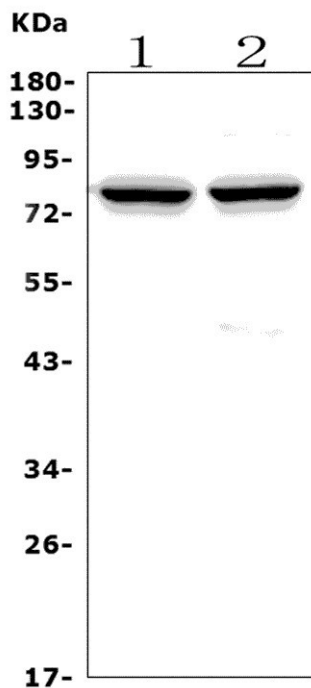
## Background Information

Choline acetyltransferase (commonly abbreviated as<sup>o</sup>ChAT, but sometimes<sup>o</sup>CAT) is a transferase enzyme responsible for the synthesis of the neurotransmitter acetylcholine. In humans, the choline acetyltransferase enzyme is encoded by the<sup>o</sup>CHAT gene. This gene product is a characteristic feature of cholinergic neurons, and changes in these neurons may explain some of the symptoms of Alzheimer's disease. Polymorphisms in this gene have been associated with Alzheimer's disease and mild cognitive impairment. Mutations in this gene are associated with congenital myasthenic syndrome associated with episodic apnea. Multiple transcript variants encoding different isoforms have been found for this gene, and some of these variants have been shown to encode more than one isoform.

## Reference

Anti-CHAT Antibody 被引用在7文献中。

## Selected Validation Data

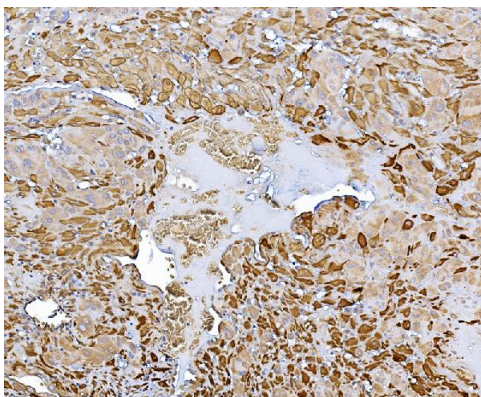


Western blot analysis of CHAT using anti-CHAT antibody (A01192-4). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human placenta whole cell lysates,

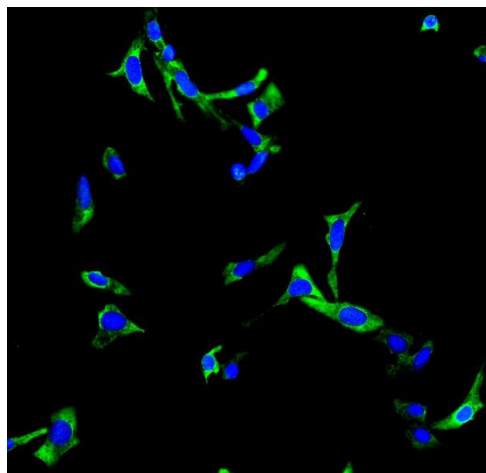
Lane 2: human U-87MG tissue lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-CHAT antigen affinity purified polyclonal antibody (A01192-4) 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 CHAT at approximately 83 kDa. The expected band size for CHAT is at 83 kDa.



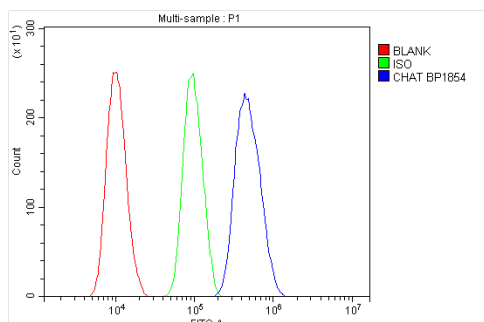
IHC analysis of CHAT using anti-CHAT antibody (A01192-4).

CHAT was detected in a paraffin-embedded section of human placenta tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-CHAT Antibody (A01192-4) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



IF analysis of CHAT using anti-CHAT antibody (A01192-4).

CHAT was detected in an immunocytochemical section of U2OS cells. The section was incubated with rabbit anti-CHAT Antibody (A01192-4) 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).



Flow Cytometry analysis of SiHa cells using anti-CHAT antibody (A01192-4).

Overlay histogram showing SiHa cells stained with A01192-4 (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-CHAT Antibody (A01192-4) 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.