

For Research Use Only

CHAT Polyclonal antibody

Catalog Number: 20747-1-AP

57 Publications



Basic Information

Catalog Number:

20747-1-AP

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

NM_020549

GeneID (NCBI):

1103

UNIPROT ID:

P28329

Full Name:

choline acetyltransferase

Calculated MW:

83 kDa

Observed MW:

47-50 kDa, 66-70 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB: 1:500-1:1000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:200-1:800

IF-P: 1:50-1:500

IF/ICC: 1:50-1:500

Applications

Tested Applications:

WB, IHC, IF/ICC, IF-P, IP, ELISA

Cited Applications:

WB, IHC, IF

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB: mouse brain tissue, mouse placenta tissue, rat brain tissue

IP: rat brain tissue,

IHC: mouse brain tissue, human lung cancer tissue, rat brain tissue

IF-P: mouse brain tissue,

IF/ICC: Neuro-2a cells,

Background Information

CHAT (choline acetyltransferase) belongs to the carnitine/choline acetyltransferase family. It catalyzes the reversible synthesis of acetylcholine (ACh) from acetyl CoA and choline at cholinergic synapses. Defects in CHAT are the cause of congenital myasthenic syndrome with episodic apnea (CMSEA). CHAT is known to be present exclusively in the cytoplasm of cholinergic neurons and anti-CHAT antibody has been considered as the best marker for cholinergic neurons. Human CHAT gene generates multiple mRNA splice variants (PMID: 10861222). All these variants possess start codons for translation of 70 kDa cCHAT protein (isoform 1). The M variant has an additional start codon for 83 kDa cCHAT protein (isoform 2), which has been found in nuclei of neuronal cells in human CNS; and the S variant has another codon for 74 kDa cCHAT protein (isoform 3). Besides, CHAT includes a short exon-skipping splice variant (peripheral type CHAT) pCHAT encoding 40-55 kDa (PMID: 31040770, 29759072). This antibody can recognize both pCHAT and cCHAT.

Notable Publications

Author	Pubmed ID	Journal	Application
Xiaoyan Liu	31574948	Int J Mol Sci	IF
Mu-Jun Chang	27624611	J Dig Dis	WB
Paulina Borkowska	36143442	Life (Basel)	

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

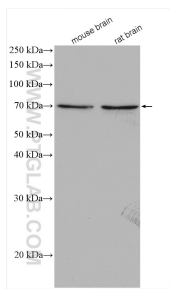
T: 4006900926

E: Proteintech-CN@ptglab.com

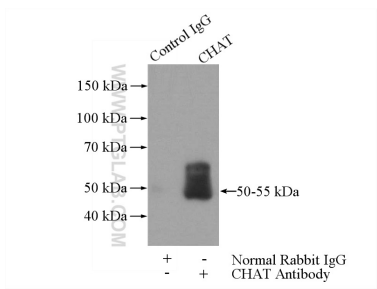
W: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

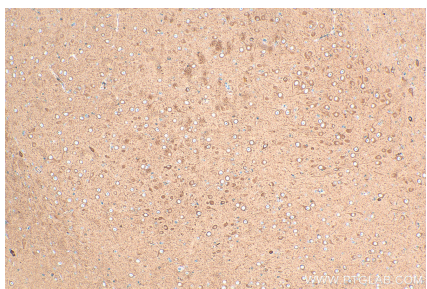
Selected Validation Data



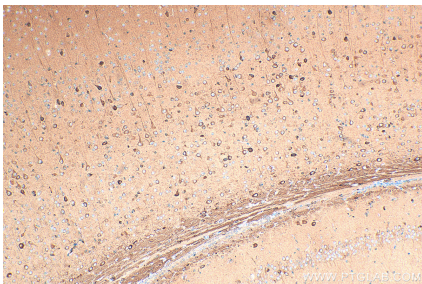
Various lysates were subjected to SDS PAGE followed by western blot with 20747-1-AP (CHAT antibody) at dilution of 1:800 incubated at room temperature for 1.5 hours.



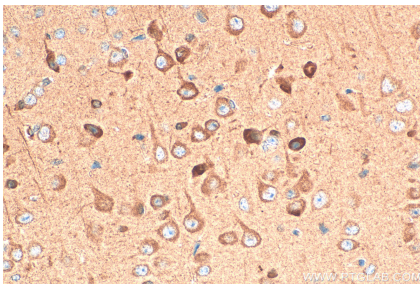
IP result of anti-CHAT (IP:20747-1-AP, 4ug; Detection:20747-1-AP 1:500) with rat brain tissue lysate 4000ug.



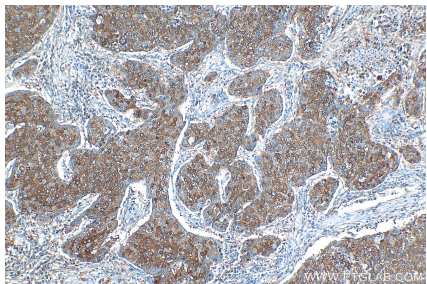
Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 20747-1-AP (CHAT antibody) at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



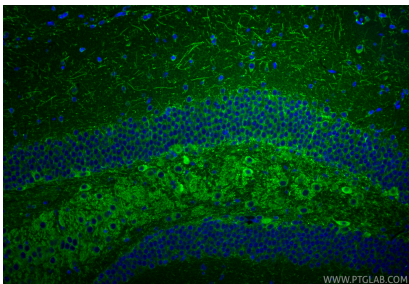
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 20747-1-AP (CHAT antibody) at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



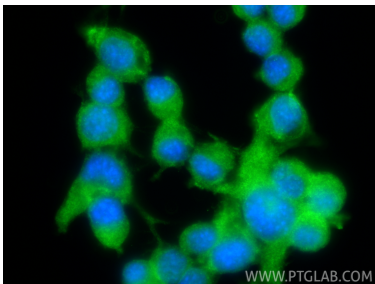
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 20747-1-AP (CHAT antibody) at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 20747-1-AP (CHAT antibody) at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse brain tissue using CHAT antibody (20747-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Ethanol) fixed Neuro-2a cells using CHAT antibody (20747-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2).