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**Biotin-labeled Antibody to Choline Acetyltransferase (ChAT), affinity-purified
RABBIT POLYCLONAL**

Catalog Number: BT-N34AP
Quantity: 50 micrograms
Format: PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4).
Host: Rabbit
Immunogen: 22 amino acid peptide from porcine ChAT (GLF SSY RLP GHT QDT LVA QKSS) coupled to KLH

Background:

Choline acetyltransferase (ChAT) catalyzes the synthesis of the neurotransmitter acetylcholine (ACh) from choline and acetyl-CoA in cholinergic neurons. ChAT serves as a specific marker for cholinergic neurons in both peripheral and central nervous systems. Dysfunction of cholinergic neurons underlies aspects of clinical symptoms found in neurological and psychiatric disorders such as Alzheimer's disease, Down and Rett syndromes.

Specificity and Preparation:

This antibody is generated at ATS using a 22 amino acid peptide from porcine ChAT (GLF SSY RLP GHT QDT LVA QKSS) as immunogen conjugated to KLH and injected in rabbits. The immunogen has 95% homology with human, rat and mouse ChAT sequences, and it has about 90% homology to the chicken sequence. The antibody is expected to cross-react with rat, mouse, human, rabbit, guinea pig and porcine ChAT protein. It has been conjugated to biotin via an amide bond. The antibody is routinely tested by western blot analysis.

Usage and Storage:

This antibody has a high titer as shown by ELISA (average titer 1:5,000,000), diluted whole sera can be used for immunohistochemistry (ATS in-house; 1:2,000-4,000), immunocytochemistry and immunoblotting (ATS in-house; western 1:1,000-2,000). Working dilutions must be determined by end user. Store the antibody at -20°C for one year. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

References:

1. Benecke S, Ostermann-Latif C, Mader M, Schmidt B, Unger JW, Westarp ME, Felgenhauer K (1993) Antibodies raised against synthetic peptides react with choline acetyltransferase in various immunoassays and in immunohistochemistry. *J Neurochem* 61(3):804-811.

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