



PhosphoSolutions®
Antibodies that work™

Colorado Biosciences Park
12635 East Montview Boulevard, #213
Aurora, CO 80045-7337
Tel: (888) 442-7100

Anti-Choline Acetyltransferase

Catalog Number: 315-ChAT **Size:** 100 µl

Product Description: Affinity purified goat polyclonal antibody

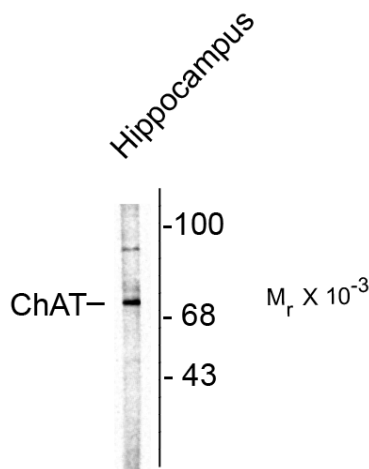
Applications: **WB:** 1:100 **IHC:** 1:100

Antigen: Native choline acetyltransferase purified from human placenta

Species reactivity: The antibody has been directly tested for reactivity in Western blots with chicken, guinea pig, human, mouse, non-human primate and rat tissues.

Biological Significance: Choline acetyltransferase is a neuronal enzyme which catalyzes the reaction between Acetyl CoA and choline resulting in the formation of acetylcholine. It is therefore found primarily in cholinergic neurons making it a valuable marker for diseases associated with decreased cholinergic function such as Schizophrenia, Alzheimer disease (AD) and Down syndrome (Holt et al. 1999). Decreased choline acetyltransferase activity in particular has been shown in Schizophrenic subjects (Karson et al 1993). It has furthermore been demonstrated that in patients with AD, there are significantly lower levels of cortical ChAT that correlate with severity of the disease as measured by loss of neuropsychological function (Baskin et al. 1999).

Anti-Choline Acetyltransferase



Western blot of rat brain lysate showing specific immunolabeling of the ~70k ChAT.

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WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in PBS + 5 mg/ml BSA + 0.2% NaN₃.. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability. For long term storage -20°C is recommended. Stable at -20°C for at least 1 year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

Purification Method: Prepared from goat serum by affinity purification using a column to which the protein immunogen was coupled.

Antibody Specificity: Specific for the ~ 70k choline acetyltransferase protein

Quality Control Tests: Western blots performed on each lot.

References:

Karson CN, Casanova MF, Kleinman JE, Griffin WS (1993) Choline acetyltransferase in schizophrenia. *Am. J. Psychiatry* 150:454-459.

Holt DJ, Herman MM, Hyde TM, Kleinman JE, Cinton CM, German DC, Hersh LB, Greybiel AM, Saper CB (1999) Evidence for a deficit in cholinergic interneurons in the striatum in schizophrenia. *Neuroscience* 94(1):21-31.

Baskin DS, Browning JL, Pirozzolo FJ, Korporaal S, Baskin JA, Appel SH (1999) Brain choline acetyltransferase and mental function in Alzheimer disease. *Arch Neurol.* 56:1121-1123.

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