Datasheet for ABIN968808

anti-Tyrosine Hydroxylase antibody (AA 18-133)

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Overview

Quantity:	50 µg
Target:	Tyrosine Hydroxylase (TH)
Binding Specificity:	AA 18-133
Reactivity:	Rat, Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Tyrosine Hydroxylase antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Rat Tyrosine Hydroxylase aa. 18-133
Clone:	45-Tyrosine Hydroxylase
Isotype:	IgG1
Cross-Reactivity:	Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	Tyrosine Hydroxylase (TH)
Alternative Name:	Tyrosine Hydroxylase (TH Products)
Background:	Dopamine and its metabolic products norepinephrine and epinephrine are catecholamine neurotransmitters whose function is essential for the execution of normal neural processes in the CNS and PNS. Tyrosine hydroxylase (TH) is a non-heme iron, tetrahydrobiopterin-dependent enzyme that catalzyes the conversion of tyrosine to L-dihydroxyphenylalanine (L-DOPA). This is the rate-limiting step in the biosynthesis of catecholamines. Both the development of Parkinson's disease and other neurodegenerative diseases result from loss of the ability to synthesize catecholamines. Decreases in the activity of TH have been implicated in these diseases. Nitration of TH at Tyrosine 423 has been associated with temporary loss of enzymatic activity, and TH nitration occurs in response to the Parkinsonian toxin MPTP, and following exposure to peroxynitrite. These findings implicate nitration as a potential mode of down-regulation of TH activity during neurodegenerative disease. Thus, TH is an essential enzyme for catecholamine synthesis, which is required for normal neuronal function.
Molecular Weight:	58 kDa
Pathways:	Dopaminergic Neurogenesis, Response to Water Deprivation, Sensory Perception of Sound, Carbohydrate Homeostasis, Feeding Behaviour

Application Details

Comment:	Related Products: ABIN967389, ABIN968545
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

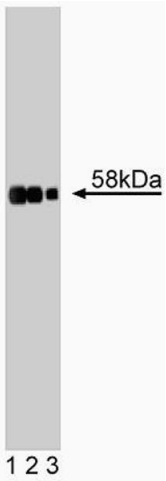
Handling

	should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

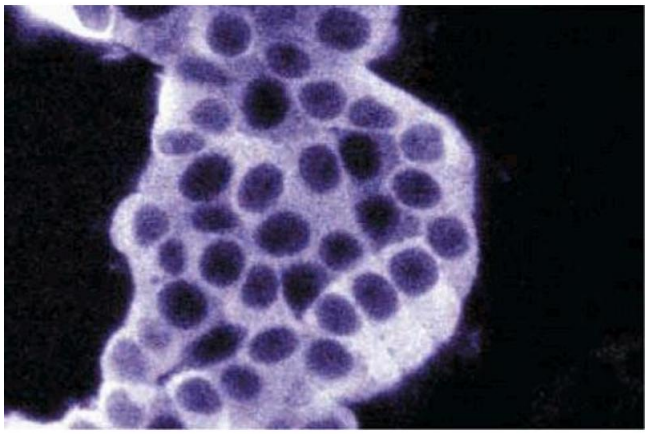
Product cited in:	Blanchard-Fillion, Souza, Friel, Jiang, Vrana, Sharov, Barrón, Schöneich, Quijano, Alvarez, Radi, Przedborski, Fernando, Horwitz, Ischiropoulos: "Nitration and inactivation of tyrosine hydroxylase by peroxynitrite." in: **The Journal of biological chemistry**, Vol. 276, Issue 49, pp. 46017-23, (2001) (PubMed). Salvatore, Waymire, Haycock: "Depolarization-stimulated catecholamine biosynthesis: involvement of protein kinases and tyrosine hydroxylase phosphorylation sites in situ." in: **Journal of neurochemistry**, Vol. 79, Issue 2, pp. 349-60, (2001) (PubMed).

Images



Western Blotting

Image 1. Western blot analysis of Tyrosine Hydroxylase on rat cerebrum lysate. Lane 1: 1:5000, lane 2: 1:10000, lane 3: 1:20000 dilution of Tyrosine Hydroxlase.



Immunofluorescence

Image 2. Immunofluorescence staining of PC12 cells.

