

Product Datasheet

## Anti-Tyrosine Hydroxylase LNC1 clone (purified)

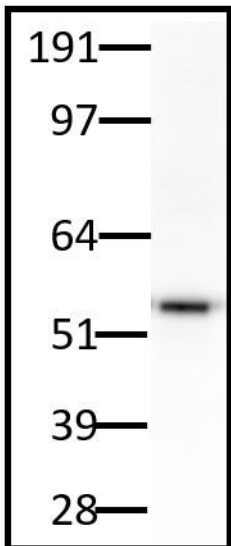
### Overview

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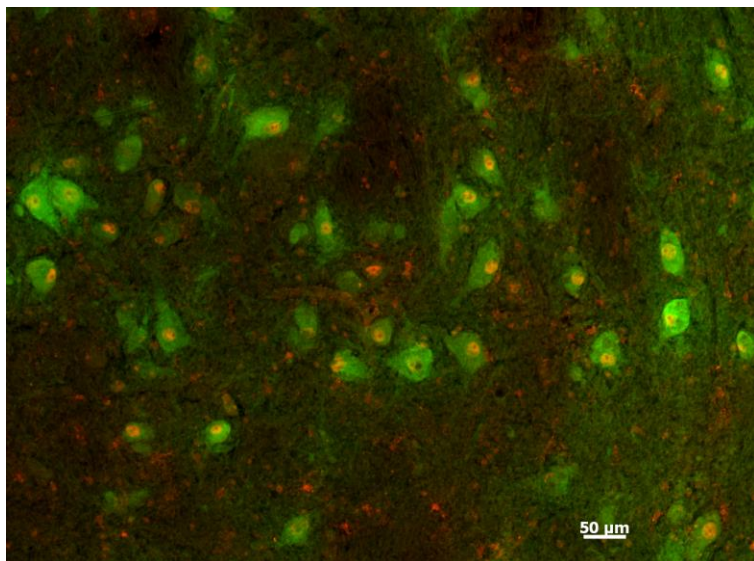
<b>Catalog #</b>	77-700
<b>Isotype</b>	IgG1
<b>Clone Number</b>	LNC1
<b>Size</b>	100 µl (77-700-100) or 20 µl (77-700-020)
<b>Concentration</b>	1.0 mg/mL
<b>Host Species</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Format</b>	Purified by Protein A chromatography
<b>Buffer</b>	10 mM Tris, 50 mM Sodium Chloride, 0.065% Sodium Azide pH 7.4
<b>Applications</b>	WB, ICC, IHC, IP
<b>Species Reactivity</b>	Chicken, Frog, Human, Lizard, Monkey, Mouse, Rat, Vole, Zebrafish
<b>Immunogen</b>	Tyrosine Hydroxylase purified from PC12 cells
<b>Molecular Weight</b>	~60 kD
<b>Cite this Antibody</b>	Anti-Tyrosine Hydroxylase clone LNC1 77-700 Antibodies Incorporated.

### Images

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LNC1 anti-TH monoclonal antibody was used at 2.5ug/mL to stain endogenous tyrosine hydroxylase in rat brain lysate.



Double-labeled fluorescence immuno-histochemistry of human midbrain dopamine neurons stained green with LNC1 and red with PitX

## Details:

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### Target Description

TH is the rate-limiting enzyme in the synthesis of the catecholamine neurotransmitters dopamine, epinephrine, and norepinephrine and is responsible for converting L-tyrosine to L-dopa. Synthesis of catecholamines is regulated by the interaction of TH with its' cofactor, tetrahydrobiopterin (BH4) and the substrates L-tyrosine and molecular oxygen. In humans four TH mRNA splice variants (hTH1-hTH4) have been isolated while subprimate species rely on a single form of TH. It is known that the hTH1-hTH4 variants are identical in their catalytic domain but differ in their N-terminal regulatory domains. Importantly, LNC1 reacts with the catalytic domain of TH and thus with all four isoforms of human TH. The role of TH in the synthesis of catecholamine neurotransmitters suggests a connection between the enzyme and a number of neuropathogenic diseases characterized by irregular catecholamine levels, such as Parkinson's disease, schizophrenia, and dystonia, as well as a variety of cardiovascular diseases.

### Purification Method

Produced by in-vitro bioreactor culture of hybridoma lines followed by Protein A affinity chromatography. Purified mAbs are >90% specific antibody at 1 mg/mL.

### Quality Control Tests

Each new lot of this antibody is tested to confirm that it recognizes a single immunoreactive band of expected molecular weight when used to probe rat brain lysate.

### Storage

Store at  $\leq -20$  C for long term storage. For short term storage, store at 2-8 C. For maximum recovery of product, centrifuge the vial prior to removing the cap.

## Recent Citations

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Sharaf A, Rahhal B, Spittau B, Roussa E. [Localization of reelin signaling pathway components in murine midbrain and striatum.](#) Cell and tissue research 359 393-407 2015.

Chand AN, Galliano E, Chesters RA, Grubb MS. [A distinct subtype of dopaminergic interneuron displays inverted structural plasticity at the axon initial segment.](#) The Journal of neuroscience : the official journal of the Society for Neuroscience 35 1573-90 2015.

Zhang S, Qi J, Li X, Wang HL, Britt JP, Hoffman AF, Bonci A, Lupica CR, Morales M. [Dopaminergic and glutamatergic microdomains in a subset of rodent mesoaccumbens axons.](#) Nature neuroscience 18 386-92 2015.

Root DH, Hoffman AF, Good CH, Zhang S, Gigante E, Lupica CR, Morales M. [Norepinephrine activates dopamine D4 receptors in the rat lateral habenula.](#) The Journal of neuroscience : the official journal of the Society for Neuroscience 35 3460-9 2015.

Uemura N, Koike M, Ansai S, Kinoshita M, Ishikawa-Fujiwara T, Matsui H, Naruse K, Sakamoto N, Uchiyama Y, Todo T, Takeda S, Yamakado H, Takahashi R. [Viable neuronopathic Gaucher disease model in Medaka \(Oryzias latipes\) displays axonal accumulation of alpha-synuclein.](#) PLoS genetics 11 e1005065 2015.

Forlano PM, Ghahramani ZN, Monestime CM, Kurochkin P, Chernenko A, Milkis D. [Catecholaminergic innervation of central and peripheral auditory circuitry varies with reproductive state in female midshipman fish, Porichthys notatus.](#) PloS one 10 e0121914 2015.

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