Novocastra™ Lyophilized Mouse Monoclonal Antibody Tyrosine Hydroxylase

Product Code: NCL-TH

Intended Use	FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.
Specificity	Human tyrosine hydroxylase. Also reacts with mouse and rat tyrosine hydroxylase.
Clone	1B5
Ig Class	1gG2a, kappa
Antigen Used for Immunizations	Prokaryotic recombinant protein corresponding to a portion of the carboxyl terminal end of the mouse tyrosine hydroxylase molecule.
Hybridoma Partner	Mouse myeloma (p3-NS1-Ag4-1).
Preparation	Lyophilized tissue culture supernatant containing sodium azide. Reconstitute with 1 mL or 0.1 mL of sterile distilled water as indicated on vial label.
Effective on Frozen Tissue	Not evaluated.
Effective on Paraffin Wax Embedded Tissue	Yes.
Recommendations on Use	Immunohistochemistry on paraffin sections. **Heat Induced Epitope Retrieval (HIER):** Please follow the instructions for use in Novocastra Epitope Retrieval Solution pH 6. **Suggested dilution:** 1:40 for 30 minutes at 25 °C. This is provided as a guide and users should determine their own optimal working dilutions. **Visualization:** Please follow the instructions for use in the Novolink™ Polymer Detection Systems. For further product information or support, contact your local distributor or regional office of Leica Biosystems, or alternatively, visit the Leica Biosystems Web site, www.LeicaBiosystems.com The performance of this antibody should be validated when utilized with other manual staining systems or automated platforms.
Positive Controls	Immunohistochemistry: brain. Western Blotting: Mouse brain.
Staining Pattern	Cytoplasmic; Dopaminergic cells.
Storage and Stability	Store unopened lyophilized antibody at 2-8 °C. Under these conditions, there is no significant loss in product performance up to the expiry date indicated on the vial label. The reconstituted antibody is stable for at least two months when stored at 2-8 °C. For long term storage, it is recommended that aliquots of the antibody are frozen at -20 °C (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Prepare working dilutions on the day of use.
Warnings and Precautions	This reagent has been prepared from the supernatant of cell culture. As it is a biological product, reasonable care should be taken when handling it. This reagent contains sodium azide. A Material Safety Data Sheet is available upon request or available from www.LeicaBiosystems.com

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BIOSYSTEMS

General Overview

Tyrosine hydroxylase is the first enzyme in catecholaminergic (CA) biosynthesis and catalyses the conversion of L-tyrosine to L-DOPA. This is the initial step for all catecholamine biosynthesis. Tyrosine hydroxylase is, therefore, a useful marker of all CA neurones and allows their localization in different areas of the brain. Adrenergic pericarya are located mainly in the rostral medulla as in lower animals and contribute a subset of axons to the main longitudinal CA bundle which runs through the medulla oblongata, pons and midbrain, such as the dorsal part of the central nucleus of the medulla oblongata, and the parvicellular reticular formation ventromedial to the facial nerve and ventrolateral to the locus coeruleus. The locus coeruleus contains only tyrosine hydroxylase immunoreactive cells and appears to be the source of a discrete dorsal CA bundle.

General References

Kitahama K, Denoroy L, Goldstein M, et al.. Neuroscience. 25 (1): 97–111 (1988).
Berod A, Hartman B K, Keller A, et al.. Brain Research. 240: 235–243 (1982).