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**Anti-Conjugated L-Dihydroxyphenylalanine (L-DOPA)
MOUSE MONOCLONAL**

Catalog Number: AB-T17
Quantity: 50 microliters
Format: Lyophilized and reconstituted with deionized water / 50% glycerol.
Host: Mouse
Isotype: IgG₁, kappa
Immunogen: synthetic L-DOPA conjugated to bovine serum albumin

Specificity and Preparation:

Monoclonal antibody was obtained after BALB/c mouse immunization with the conjugate L-dihydroxyphenylalanine (L-DOPA)-Glutaraldehyde-Carriers and hybridization of spleen cells with the myeloma cell line SP2/O/Ag14. Ascites production was performed in BALB/c mice. The ascitic fluid was purified by ammonium sulfate precipitation.

This antibody targets conjugated L-dihydroxyphenylalanine (L-DOPA). It is unable to detect free L-DOPA, since this molecule is too small. 4 or 5 amino acids are needed to block the antibody site, and here, the target is conjugated L-DOPA (L-DOPA-reduced glutaraldehyde-Lysine). The specificity is focused on the L-DOPA, but a bigger molecule is required to have good binding. It is necessary before testing to bind the L-DOPA on the proteins of the extract (or of the tissue) then to reduce.

Using a conjugate L-DOPA-Glutaraldehyde-BSA, antibody specificity was performed with an ELISA test by competition experiments with the following compounds:

COMPOUND	CROSS REACTIVITY §
L-DOPA-G-BSA	1
Dopamine-G-(Pc)	1/>50,000
Noradrenaline-G-(Pc)	1/>50,000
Tyrosine-G-(Pc)	1/>50,000

G = Glutaraldehyde, Pc = Protein carrier, BSA = bovine serum albumin

§ L-DOPA-G-BSA concentration/other conjugated catecholamine concentration at half-displacement.

Usage and Storage:

Applications include ELISA (1/1,000-1/5,000), immunocytochemistry, immunohistochemistry (1/1,000-1/5,000), and immunoblotting (western blot 1/1,000-1/2,000). Fixation of tissue for use with these antibodies should be done with glutaraldehyde. The use of paraformaldehyde in conjunction with glutaraldehyde may improve staining results. Store the antibody at 4°C for one month or -20°C in undiluted aliquots for up to one year. Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

Available Control(s): Corresponding antigen.

References:

1. Tison F, Mons N, Geffard M, Henry P (1990) Immunohistochemistry of endogenous L-DOPA in the rat posterior hypothalamus. *Histochemistry* 93(6):655-660.
2. Lagier B, Charrier MC, Geffard M, Doutremepuich C (1992) Effects of polyclonal antibodies against conjugated L-DOPA or against conjugated acetylcholine on experimental venous thrombosis. *Thromb Res* 65(2):275-280.
3. Arai R, Karasawa N, Geffard M, Nagatsu I (1995) L-DOPA is converted to dopamine in serotonergic fibers of the striatum of the rat: a double-labeling immunofluorescence study. *Neurosci Lett* 195:195-198.

To view protocol(s) for this product please visit: www.ATSBio.com/catalog/protocols