Alpha-Synuclein
Clone KM51
Cat. no. MONX10738

Specificity
Alpha-synuclein, also known as the non-AB component of Alzheimer’s disease amyloid precursor protein (NCAP). Does not crossreact with beta-synuclein. Alpha-synuclein is a protein of 140 amino acids and a member of the synuclein family. It shares sixty one per cent of its sequence with beta-synuclein and is highly conserved between vertebrate species. It does not possess a signal sequence suggesting that it is an intracellular protein. All synucleins have the unusual organisation based around an eleven residue repeating motif and an alpha-helical secondary structure resembling those found in the lipid-binding domain of exchangeable apolipoproteins including Apo E. This homology suggests a direct interaction of alpha-synuclein with membranes consistent with its affinity for synaptosomes. The function of alpha-synuclein may be to carry a target protein to the inner membrane of nerve terminals or to the outer surface of synaptic vesicles. Western blot analyses of highly purified Lewy bodies from Lewy body dementia brain material has shown full-length, partially truncated and insoluble aggregates of alpha-synuclein. Alpha-synuclein may be implicated in the formation of Lewy bodies and the selective degeneration of neurons in sporadic Parkinson’s disease and Lewy body dementia. MONX-10738, specific for alpha-synuclein and unreactive with beta-synuclein, will be useful for the confirmation of Parkinson’s disease and Lewy body dementia and other studies for the localisation and detection of alpha-synuclein.

Immunoglobulin type
Murine IgG1, kappa

Use
The antibody can be used for immunohistochemistry on paraffin sections.

Instructions for use
Immunohistochemistry:
Typical working dilution 1:20 -1:40.
High temperature antigen unmasking technique using 1mM EDTA (pH8.0).
60 minutes primary antibody incubation at 25°C.
Standard ABC technique.

Staining pattern: Lewy body and neuropil staining.
Antigen used for immunisations: Prokaryotic recombinant protein corresponding to the full length alpha-synuclein molecule.

Positive control
Prosterior cingulate gyrus (Lewy body dementia).

Presentation
Lyophilised tissue culture supernatant containing 15mM sodium azide.
Reconstitute with 1ml or 0.1ml of sterile distilled water as indicated on vial label.
Literature

Storage and Handling
Store unopened lyophilised antibody at 4°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 4°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.

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