Human α-Synuclein Antibody

Monoclonal Mouse IgG_{2B} Clone # 1060506

Catalog Number: MAB11376

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human α-Synuclein in direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1060506
Purification	Protein A or G purified from cell culture supernatant
Immunogen	*E. coli*-derived human alpha-Synuclein Met1-Ala140 Accession # P37840
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

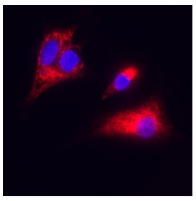
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

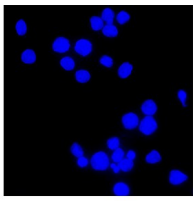
	Recommended Concentration	Sample
Immunocytochemistry	5-25 µg/mL	Immersion fixed SK-Mel-28 human malignant melanoma cells (positive) and HL-60 human acute promyelocytic leukemia cells (negative)
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of Human Brain Cerebellum

DATA

Immunocytochemistry



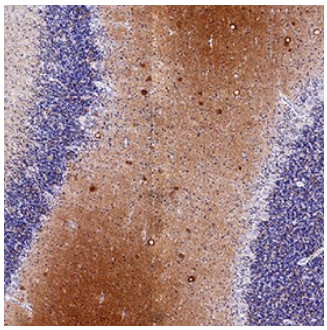
SK-MEL-28 (Positive) cells



HL-60 (Negative) cells

Detection of α-Synuclein in SK-Mel-28 cells (positive) and HL-60 cells (negative). α-Synuclein was detected in immersion fixed SK-Mel-28 human malignant melanoma cells (positive) and absent in HL-60 human acute promyelocytic leukemia cells (negative) using Mouse Anti-Human α-Synuclein Monoclonal Antibody (Catalog # MAB11376) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



Detection of α-Synuclein in Human Brain Cerebellum. α-Synuclein was detected in immersion fixed paraffin-embedded sections of Human Brain Cerebellum using Mouse Anti-Human α-Synuclein Monoclonal Antibody (Catalog # MAB11376) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to medulla. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

α-Synuclein is member of a family of small soluble proteins that include also β-, and γ-Synuclein. It is predominantly expressed in neurons of the central nervous system in the presynaptic region of nerve terminals, where it cycles between a free, partially unfolded and a helical, membrane-bound form. α-Synuclein can self-aggregate *in vivo* and *in vitro*, forming various oligomeric species and fibrillar and amorphous aggregates. The fibrils and amyloidal forms of α-Synuclein are major components of Lewy bodies and Lewy neurites and have been linked to the pathogenesis of Parkinson's Disease, Parkinson's Disease Dementia, and dementia with Lewy bodies. α-Synuclein aggregates can be also found associated with amyloid plaques in Alzheimer's Disease.

References:

1. Breydo L. *et al.* (2012) Biochim. Biophys. Acta. **1822**:261.
2. Chen R.H. *et al.* (2013) J. Biol. Chem. **288**:7438.
3. Li X. *et al.* (2008) Acta Biochim. Biophys. Sin (Shanghai) **40**:406.
4. Surguchov A. (2008) Int. Rev. Cell Mol. Biol. **270**:225.
5. Xia Q. *et al.* (2008) Front. Biosci. **13**:3850.

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