

Mouse Anti-PI3K p110 alpha [A8]: MC0353, MC0353RTU7

Intended Use: For Research Use Only

Description: Phosphoinositide 3-kinase (PI3K) catalyzes the production of phosphatidylinositol-3,4,5-triphosphate by phosphorylating phosphatidylinositol (PI), phosphatidylinositol-4-phosphate (PIP), and phosphatidylinositol-4,5-bisphosphate (PIP₂). Growth factors and hormones trigger this phosphorylation event, which in turn coordinates cell growth, cell cycle entry, cell migration, and cell survival. PTEN reverses this process, and research studies have shown that the PI3K signaling pathway is constitutively activated in human cancers that have loss of function of PTEN. PI3Ks are composed of a catalytic subunit (p110) and a regulatory subunit. Various isoforms of the catalytic subunit (p110 α , p110 β , p110 γ , and p110 δ) have been isolated, and the regulatory subunits that associate with p110 α , p110 β , and p110 δ are p85 α and p85 β . In contrast, p110 γ associates with a p101 regulatory subunit that is unrelated to p85. Furthermore, p110 γ is activated by $\beta\gamma$ subunits of heterotrimeric G proteins.

Specifications:

Clone: A8
 Source: Mouse
 Isotype: IgG1k
 Reactivity: Human, mouse, rat
 Immunogen: Amino acids 363-582 of N-terminus of human PI 3-kinase p110 alpha
 Localization: Cytoplasm
 Formulation: Antibody in PBS pH7.4, containing BSA and $\leq 0.09\%$ sodium azide (NaN₃)
 Storage: Store at 2°- 8°C
 Applications: IHC, ELISA, IF, IP, WB
 Package:

Description	Catalog No.	Size
PI3K p110 alpha [A8] Concentrated	MC0353	1 ml
PI3K p110 alpha [A8] Prediluted	MC0353RTU7	7 ml

IHC Procedure*:

Positive Control Tissue: Brain tissue
 Concentrated Dilution: 50-200
 Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
 Incubation Time and Temp: 30-60 minutes @ RT
 Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human brain tissue stained with anti- PI3K p110 alpha using DAB

References:

1. Phosphatidylinositol 3-kinase p110 δ expression in Merkel cell carcinoma. Chteinberg E, et al. Oncotarget. Jul 3;9(51):29565-29573, 2018.
2. Behavioral, Neurophysiological, and Synaptic Impairment in a Transgenic Neuregulin1 (NRG1-IV) Murine Schizophrenia Model. Papaleo F, et al. J Neurosci. Apr 27;36(17):4859-75, 2016.
3. P110 α -mediated constitutive PI3K signaling limits the efficacy of p110 δ -selective inhibition in mantle cell lymphoma, particularly with multiple relapse. Iyengar S, et al. Blood. Mar 21;121(12):2274-84, 2013.

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Rev. A