

INSM1

Mouse Monoclonal antibody(Mab)
Catalog # AD80574

Product Information

Application IHC-P **Primary Accession** Q01101 Reactivity Human **Predicted** Human Host Mouse Clonality Monoclonal **Clone Names** 194I2C7 Calculated MW 52923

Additional Information

Gene ID 3642

Dilution IHC-P~~Ready-to-use

Storage Maintain refrigerated at 2-8°C.

Protein Information

Name INSM1

Synonyms IA1

Function Sequence-specific DNA-binding transcriptional regulator that plays a key role

in neurogenesis and neuroendocrine cell differentiation during embryonic

and/or fetal development. Binds to the consensus sequence

5'-[TG][TC][TT][GA]GGG[CG]A-3' in target promoters. Acts as a

transcriptional repressor of NEUROD1 and INS expression via its interaction with cyclin CCND1 in a cell cycle- independent manner. Negatively regulates skeletal muscle-specific gene expression in endocrine cells of the pituitary by inhibiting the Notch signaling pathway. Represses target gene transcription by recruiting chromatin-modifying factors, such as HDAC1, HDAC2, HDAC3, KDM1A and RCOR1 histone deacetylases. Binds to its own promoter,

suggesting autoregulation as a self-control feedback mechanism. Competes with histone H3 for the same binding site on the histone demethylase complex formed by KDM1A and RCOR1, and thereby inhibits demethylation of

histone H3 at 'Lys-4' (PubMed: <u>23721412</u>). Promotes the generation and expansion of neuronal basal progenitor cells in the developing neocortex. Involved in the differentiation of endocrine cells of the developing anterior pituitary gland, of the pancreas and intestine, and of sympatho-adrenal cells in the peripheral nervous system. Promotes cell cycle signaling arrest and

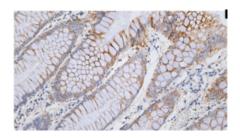
inhibition of cellular proliferation.

Cellular Location Nucleus {ECO:0000250 | UniProtKB:Q63ZV0}.

Tissue Location

Expressed in pancreatic duct cells. Expressed in several tumor cell lines of neuroendocrine origin including pheochromocytoma, medullary thyroid carcinoma, insulinoma, medulloblastoma, retinoblastoma, pheochromacytoma, medullary thyroid carcinoma and small cell lung carcinoma.

Images



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