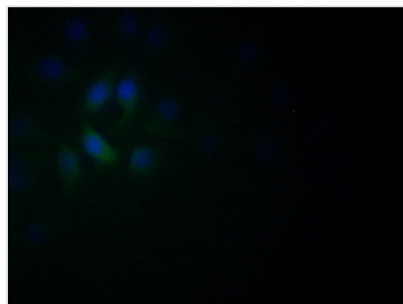




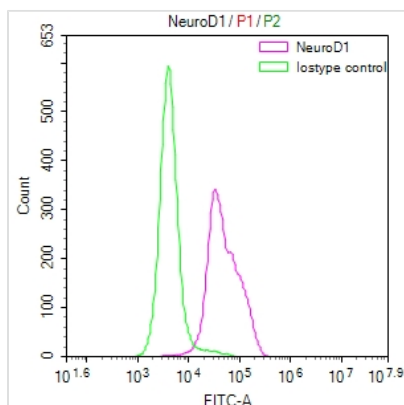
NEUROD1 Recombinant Monoclonal Antibody

Product Code	CSB-RA982003A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q13562
Immunogen	A synthesized peptide derived from Human NEUROD1
Species Reactivity	Human
Tested Applications	ELISA, IF, FC; Recommended dilution: IF:1:50-1:200, FC:1:50-1:200
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling?Neuroscience?Cancer?Cardiovascular;Metabolism
Gene Names	NEUROD1
Clone No.	5D2

Image



Immunofluorescence staining of A549 with CSB-RA982003A0HU at 1:60, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 522-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Overlay Peak curve showing SH-SY5Y cells stained with CSB-RA982003A0HU (red line) at 1:50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1 μ g/1 \times 10⁶ cells) for 45min at 4 $^{\circ}$ C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4 $^{\circ}$ C. Control antibody (green line) was rabbit IgG (1 μ g/1 \times 10⁶ cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

In efforts to create a recombinant monoclonal antibody specific to NEUROD1, the initial step involved immunizing a rabbit with a synthesized peptide derived from human NEUROD1 protein. Following immunization, B cells were isolated from the rabbit, and RNA was extracted from these cells. The extracted RNA was reverse-transcribed into cDNA, which served as a template for extending NEUROD1 antibody genes using degenerate primers. These extended NEUROD1 antibody genes were incorporated into a plasmid vector and introduced into host cells for expression. Subsequently, the NEUROD1 recombinant monoclonal antibody was purified from the cell culture supernatant through affinity chromatography and evaluated for its utility in ELISA, IF, and FC applications, showing specific reactivity with human NEUROD1 protein.

NEUROD1 is a critical transcription factor that orchestrates the differentiation and maturation of neurons during development, contributes to the formation of neural circuits, and plays a role in the maintenance of neuronal identity. Its functions are essential for the proper functioning of the nervous system, and its dysregulation can have significant implications for neurological health and disease.