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Brain2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54226

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	P20265
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46893
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Brain2/POU3F2
Epitope Specificity	301-400/443
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
SIMILARITY	Belongs to the POU transcription factor family. Class-3 subfamily. Contains 1 homeobox DNA-binding domain. Contains 1 POU-specific domain.
SUBUNIT	Interacts with PQBP1.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The Brn family of transcription factors are found in a highly restricted subset of neurons and are critical to the early embryonic development of the central nervous system. Brn-1 and Brn-2 are class III POU domain proteins. Expressed during the development of the forebrain and coexpressed in most layer II-V cortical neurons, Brn-1 and Brn-2 appear to critically control the initiation of radial migration of cortical neurons. Brn-2 is thought to be involved in smooth muscle cell development and differentiation. Brn-3 is a class IV POU domain protein. Three Brn-3 proteins have been described and are designated Brn-3a, Brn-3b and Brn-3c. Brn-3a has two functional transactivating domains, one at the amino terminus and one at the carboxy terminus. While Brn-3a and Brn-3c stimulate transcription, Brn-3b generally functions as a transcriptional repressor. However, Brn-3b, but not Brn-3a, has been shown to regulate the expression of the acetylcholine receptor.

Additional Information

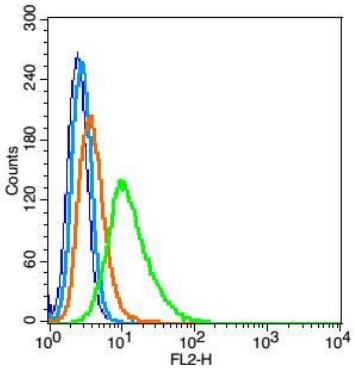
Gene ID	5454
Other Names	POU domain, class 3, transcription factor 2, Brain-specific homeobox/POU domain protein 2, Brain-2, Brn-2, Nervous system-specific octamer-binding transcription factor N-Oct-3, Octamer-binding protein 7, Oct-7, Octamer-binding transcription factor 7, OTF-7, POU3F2, BRN2, OCT7, OTF7

Target/Specificity	Expressed specifically in the neuroectodermal cell lineage.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,Flow-Cyt=1 □g/Test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

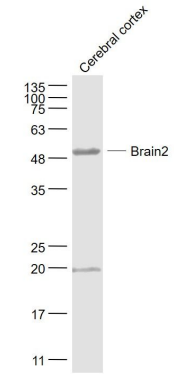
Name	POU3F2
Synonyms	BRN2, OCT7, OTF7
Function	Transcription factor that plays a key role in neuronal differentiation (By similarity). Binds preferentially to the recognition sequence which consists of two distinct half-sites, ('GCAT') and ('TAAT'), separated by a non-conserved spacer region of 0, 2, or 3 nucleotides (By similarity). Acts as a transcriptional activator when binding cooperatively with SOX4, SOX11, or SOX12 to gene promoters (By similarity). The combination of three transcription factors, ASCL1, POU3F2/BRN2 and MYT1L, is sufficient to reprogram fibroblasts and other somatic cells into induced neuronal (iN) cells in vitro (By similarity). Acts downstream of ASCL1, accessing chromatin that has been opened by ASCL1, and promotes transcription of neuronal genes (By similarity).
Cellular Location	Nucleus.
Tissue Location	Expressed specifically in the neuroectodermal cell lineage

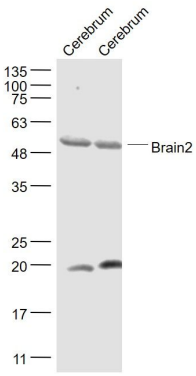
Images



Blank control(blue): RSC96(fixed with 2% paraformaldehyde (10 min) and then permeabilized with ice-cold 90% methanol for 30 min on ice).
Primary Antibody:Rabbit Anti-Brain2 antibody(AP54226), Dilution: 1 µg in 100 µL 1X PBS containing 0.5% BSA;
Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions);
Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Sample:
Cerebral cortex (Mouse) Lysate at 40 ug
Primary: Anti- Brain2 (AP54226) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 49 kD
Observed band size: 49kD





Sample:
Cerebrum (Mouse) Lysate at 40 ug
Cerebrum (Rat) Lysate at 40 ug
Primary: Anti- Brain2 (AP54226) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 49 kD
Observed band size: 49 kD