

NELF Antibody

Catalog # ASC11612

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q6X4W1
Other Accession	NP_056352 , 46397396
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	60143
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NELF antibody can be used for detection of NELF by Western blot at 1 - 2 μ g/mL.

Additional Information

Gene ID	26012
Other Names	NMDA receptor synaptonuclear signaling and neuronal migration factor, Nasal embryonic luteinizing hormone-releasing hormone factor, Nasal embryonic LHRH factor, NSMF, NELF
Target/Specificity	NELF;
Reconstitution & Storage	NELF antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	NELF Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NSMF
Synonyms	NELF
Function	Couples NMDA-sensitive glutamate receptor signaling to the nucleus and triggers long-lasting changes in the cytoarchitecture of dendrites and spine synapse processes. Part of the cAMP response element-binding protein (CREB) shut-off signaling pathway. Stimulates outgrowth of olfactory axons and migration of gonadotropin-releasing hormone (GnRH) and luteinizing-hormone-releasing hormone (LHRH) neuronal cells.
Cellular Location	Nucleus. Nucleus envelope. Nucleus membrane. Nucleus matrix. Cytoplasm. Cytoplasm, cell cortex. Cytoplasm, cytoskeleton. Cell membrane; Peripheral

membrane protein. Cell projection, dendrite Synapse. Synapse, synaptosome. Postsynaptic density. Membrane. Note=Found on the outside of the luteinizing-hormone-releasing hormone (LHRH) cell membrane and axons projecting from the olfactory pit and epithelium Associates with transcriptionally active chromatin regions. Detected at the nuclear membranes of CA1 neurons. Cortical cytoskeleton. Localized in proximal apical dendrites. Colocalizes with CABP1 in dendrites and dendritic spines. Myristoylation is a prerequisite for extranuclear localization. Translocates from dendrites to the nucleus during NMDA receptor-dependent long-term potentiation (LTP) induction of synaptic transmission at Schaffer collateral/CA1 synapses of hippocampal primary neurons and in a importin-dependent manner (By similarity)

Tissue Location

Highly expressed in adult and fetal brain. Weakly expressed in heart, liver, spleen, testis, small intestine, skeletal muscle, peripheral white blood cells and kidney

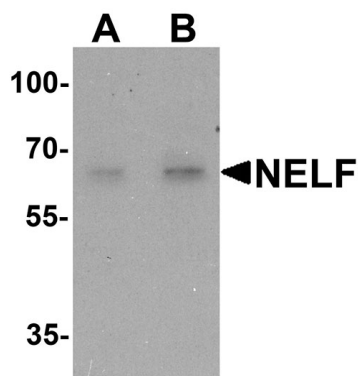
Background

NELF Antibody: NELF (nasal embryonic luteinizing hormone-releasing hormone factor) is a 530 amino acid transcription factor involved in the migration of LHRH neurons, outgrowth of olfactory axons and suppression of transcription elongation. NELF is found in the peripheral and central nervous system during embryonic development, and is highly expressed in adult testis, kidney and brain. Known to couple NMDA receptor signaling to the nucleus, NELF knockdown impaired GnRH neuronal migration of NLT cells in vitro and the gene encoding NELF has been linked to the development of Idiopathic hypogonadotropic hypogonadism (IHH), a disorder resulting in impaired pubertal maturation and reproductive function.

References

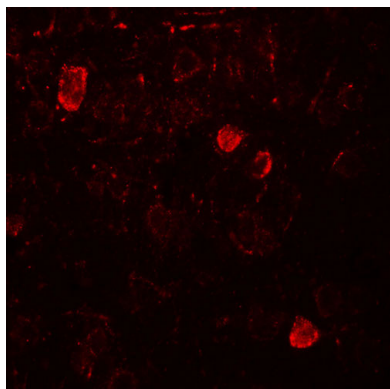
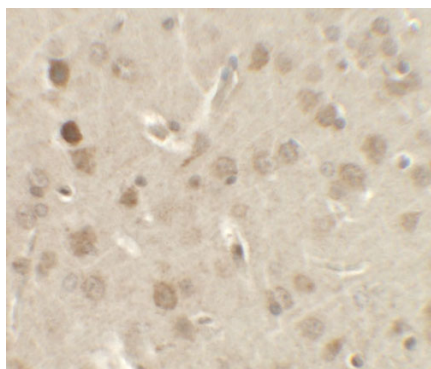
Kramer PR and Wray S. Novel gene expressed in nasal region influences outgrowth of olfactory axons and migration of luteinizing hormone-releasing hormone (LHRH) neurons. *Genes Dev.* 2000; 14:1824-34.
Yung TM, Narita T, Komori T, et al. Cellular dynamics of the negative transcription elongation factor NELF. *Exp. Cell Res.* 2009; 315:1693-705.
Xu N, Bhagavath B, Kim HG, et al. NELF is a nuclear protein involved in hypothalamic GnRH neuronal migration. *Mol. Cell Endocrinol.* 2010; 319:47-55.
Miura K, Acierno JS and Seminara SB. Characterization of the human nasal embryonic LHRH factor gene, NELF, and a mutation screening among 65 patients with idiopathic hypogonadotropic hypogonadism (IHH). *J. Hum. Genet.* 2004; 49: 265-8.

Images



Western blot analysis of NELF in HeLa cell lysate with NELF antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of NELF in rat brain tissue with NELF antibody at 2.5 µg/ml.



Immunofluorescence of NELF in rat brain tissue with NELF antibody at 20 $\mu\text{g/ml}$.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.