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NACC1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1489a

Product Information

Application	WB, IHC, E
Primary Accession	Q96RE7
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6H2
Isotype	IgG1
Calculated MW	57258
Description	NAC1 or nuclear accumbens-1 is a nuclear factor that belongs to the POZ/BTB (Pox virus and zinc finger/bric-a-brac tramtrack broad complex) domain family. Also known as BTBD14B, it was originally identified in a unique neuronal forebrain structure responsible for reward motivation and addictive behaviors . NAC1 recruits HDAC3 and HDAC4 to transcriptionally repress gene expression in neuronal cells (3) and specifically co-represses other POZ/BTB proteins in the central nervous system . NAC1 is upregulated in several tumor types, including breast, renal cell, and hepatocellular carcinoma, as well as high grade ovarian serous carcinoma, where it has long been suspected as a chemoresistance gene . The chemoresistance mechanism reportedly occurs through NAC1 negative regulation of the GADD45 pathway . NAC1 has also been described as part of the extended transcriptional network in pluripotent cells that involves Oct-4, Sox2, Nanog, Sall1, KLF4 and Sall4 . Tissue specificity: Overexpressed in several types of carcinomas including ovarian serous carcinomas. Expression levels positively correlate with tumor recurrence in ovarian serous carcinomas, and intense immunoreactivity in primary ovarian tumors predicts early recurrence. Up-regulated in ovarian carcinomas after chemotherapy, suggesting a role in development of chemotherapy resistance in ovarian cancer .
Immunogen	Purified recombinant fragment of human NACC1 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	112939
Other Names	Nucleus accumbens-associated protein 1, NAC-1, BTB/POZ domain-containing protein 14B, NACC1, BTBD14B, NAC1
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store

	at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NACC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NACC1
Synonyms	BTBD14B, NAC1
Function	Functions as a transcriptional repressor. Seems to function as a transcriptional corepressor in neuronal cells through recruitment of HDAC3 and HDAC4. Contributes to tumor progression, and tumor cell proliferation and survival. This may be mediated at least in part through repressing transcriptional activity of GADD45GIP1. Required for recruiting the proteasome from the nucleus to the cytoplasm and dendritic spines.
Cellular Location	Nucleus. Cytoplasm. Note=Distribution in the cytoplasm is dependent on phosphorylation.
Tissue Location	Overexpressed in several types of carcinomas including ovarian serous carcinomas. Expression levels positively correlate with tumor recurrence in ovarian serous carcinomas, and intense immunoreactivity in primary ovarian tumors predicts early recurrence. Up-regulated in ovarian carcinomas after chemotherapy, suggesting a role in development of chemotherapy resistance in ovarian cancer.

References

1. Neuroscience. 2002;110(3):421-9. 2. Proc Natl Acad Sci U S A. 2004 Aug 17;101(33):12130-5.

Images

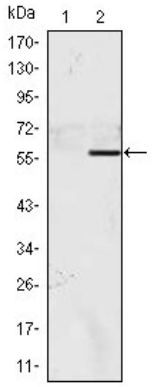

Figure 1: Western blot analysis using NACC1 mAb against HEK293 (1) and NACC1(AA: 165-438)-hIgGFc transfected HEK293 (2) cell lysate.

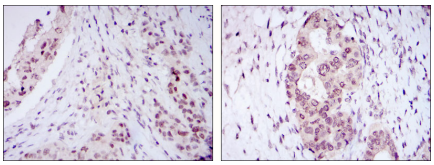

Figure 2: Immunohistochemical analysis of paraffin-embedded mammary cancer tissues (left) and ovarian cancer tissues (right) using NACC1 mouse mAb with DAB staining.

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