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ID2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2255a

Product Information

Application	WB, IHC, FC, E
Primary Accession	Q02363
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4E12G5
Isotype	IgG1
Calculated MW	14917
Description	The protein encoded by this gene belongs to the inhibitor of DNA binding family, members of which are transcriptional regulators that contain a helix-loop-helix (HLH) domain but not a basic domain. Members of the inhibitor of DNA binding family inhibit the functions of basic helix-loop-helix transcription factors in a dominant-negative manner by suppressing their heterodimerization partners through the HLH domains. This protein may play a role in negatively regulating cell differentiation. A pseudogene of this gene is located on chromosome 3.
Immunogen	Purified recombinant fragment of human ID2 (AA: 1-134) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	3398
Other Names	DNA-binding protein inhibitor ID-2, Class B basic helix-loop-helix protein 26, bHLHb26, Inhibitor of DNA binding 2, Inhibitor of differentiation 2, ID2, BHLHB26
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
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	ID2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ID2

Synonyms	BHLHB26
Function	Transcriptional regulator (lacking a basic DNA binding domain) which negatively regulates the basic helix-loop-helix (bHLH) transcription factors by forming heterodimers and inhibiting their DNA binding and transcriptional activity. Implicated in regulating a variety of cellular processes, including cellular growth, senescence, differentiation, apoptosis, angiogenesis, and neoplastic transformation. Inhibits skeletal muscle and cardiac myocyte differentiation. Regulates the circadian clock by repressing the transcriptional activator activity of the CLOCK-BMAL1 heterodimer. Restricts the CLOCK and BMAL1 localization to the cytoplasm. Plays a role in both the input and output pathways of the circadian clock: in the input component, is involved in modulating the magnitude of photic entrainment and in the output component, contributes to the regulation of a variety of liver clock-controlled genes involved in lipid metabolism.
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:P41136}. Nucleus {ECO:0000250|UniProtKB:P41136}
Tissue Location	Highly expressed in early fetal tissues, including those of the central nervous system

References

1.J Neurosci Res. 2012 May;90(5):925-32. 2.Mol Cancer. 2010 Jun 17;9:151.

Images

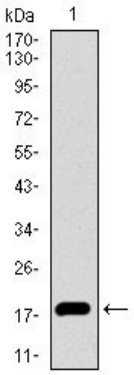

Figure 1: Western blot analysis using ID2 mAb against human ID2 recombinant protein. (Expected MW is 17.3 kDa)

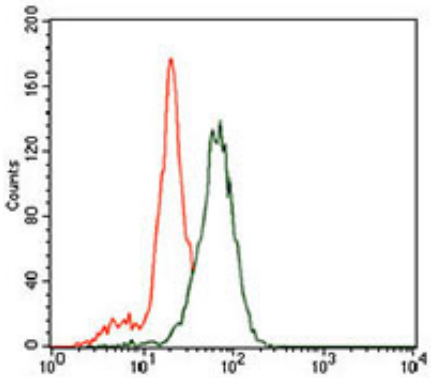

Figure 2: Flow cytometric analysis of SK-N-SH cells using ID2 mouse mAb (green) and negative control (purple).

Figure 3: Immunohistochemical analysis of paraffin-embedded breast cancer tissues using ID2 mouse mAb with DAB staining.

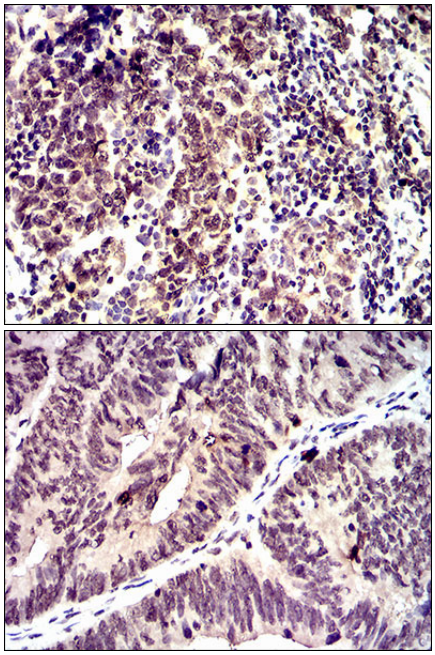

Figure 4: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using ID2 mouse mAb with DAB staining.