

# ID2 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO2254a

## Product Information

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<b>Application</b>	WB, IHC, FC, E
<b>Primary Accession</b>	<a href="#">Q02363</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	4E12G5
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	14917
<b>Description</b>	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.
<b>Immunogen</b>	Purified recombinant fragment of human ID2 (AA: 1-134) expressed in E. Coli.
<b>Formulation</b>	Ascitic fluid containing 0.03% sodium azide.

## Additional Information

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<b>Gene ID</b>	3398
<b>Other Names</b>	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
<b>Dilution</b>	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
<b>Storage</b>	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.
<b>Precautions</b>	ID2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	ID2
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## 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

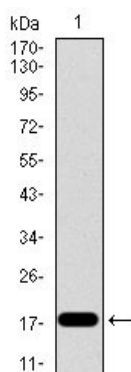


Figure 1: Western blot analysis using ID2 mAb against human ID2 recombinant protein. (Expected MW is 17.3 kDa)

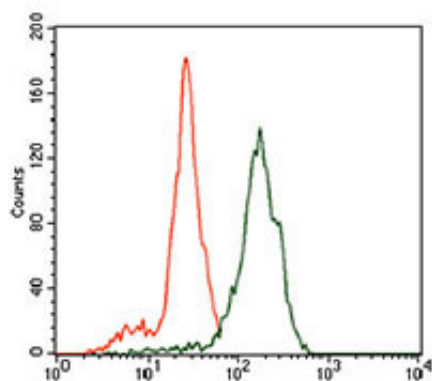


Figure 2: Flow cytometric analysis of SK-N-SH cells using ID2 mouse mAb (green) and negative control (purple).

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

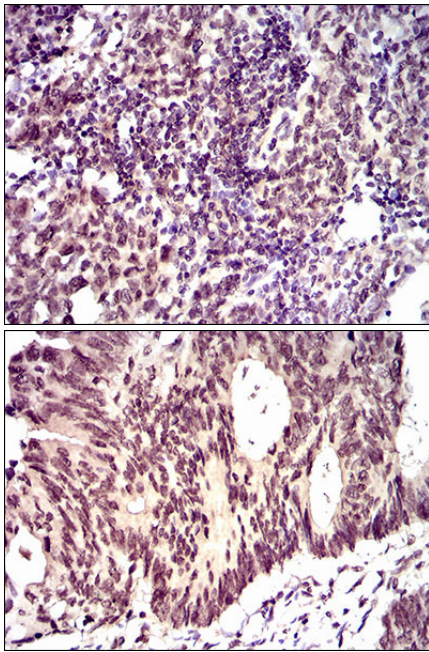


Figure 4: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using ID2 mouse mAb with DAB staining.

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