ID1 Antibody – Rabbit Monoclonal

PRODUCT OVERVIEW

Product Name	ID1, Monoclonal Antibody
Full Product Name	ID1 Conjugated Antibody
Product Gene Name	anti-ID1 antibody
Product Synonym Names	bHLHb24 antibody; Class B basic helix-loop-helix protein 24 antibody; dJ857M17.1.2 (inhibitor of DNA binding 1; dominant negative helix-loop-helix protein) antibody; DNA binding protein inhibitor ID 1 antibody; DNA binding protein inhibitor ID1 antibody; DNA-binding protein inhibitor ID-1 antibody; Dominant negative helix loop helix protein antibody; ID 1 antibody; ID antibody; ID1 antibody; ID1_HUMAN antibody; Inhibitor of Differentiation 1 antibody; Inhibitor of DNA binding 1 antibody; inhibitor of DNA binding 1; dominant negative helix-loop-helix protein antibody
Clonality	Monoclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Preparation and Storage	Store at 4 degree C for 6 months.
Molecular Weight	15,586 Da
OMIM	600349
3D Structure	ModBase 3D Structure for P41134
Antibody Type	Recombinant Antibody
Immunogen	Recombinant protein
Conjugation	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Excitation Emission	AF350: 346nm/442nm
Applications Tested/Suitable for anti-ID1 antibody	Most Applications
Application Notes for anti-ID1 antibody	Suggested Dilution: AF350 conjugated: most applications: 1:50-1:250 AF405 conjugated: most applications: 1:50-1:250 AF488 conjugated: most applications: 1:50-1:250 AF555 conjugated: most applications: 1:50-1:250 AF594 conjugated: most applications: 1:50-1:250 AF647 conjugated: most applications: 1:50-1:250 AF680 conjugated: most applications: 1:50-1:250 AF750 conjugated: most applications: 1:50-1:250 Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1:50-1:1000
Related Product Information for anti-ID1 antibody	Members of the Id family of basic helix-loop-helix (bHLH) proteins include Id1, Id2, Id3 and Id4. They are ubiquitously expressed and dimerize with members of the class A and B HLH proteins. Due to the absence of the basic region, the resulting heterodimers cannot bind DNA. The Id-type proteins thus appear to negatively regulate DNA binding of bHLH proteins. Since Id1 inhibits DNA binding of E12 and Myo D, it apparently functions to inhibit muscle-specific gene expression. Under conditions that facilitate muscle cell differentiation, the Id protein levels fall, allowing E12 and/or E47 to form heterodimers with Myo D and myogenin, which in turn activate myogenic differentiation. It has been shown that expression of each of the Id proteins is strongly dependent on growth factor activation and that reduction of Id mRNA levels by antisense oligonucleotides leads to a delayed reentry of arrested cells into the cell cycle following growth factor stimulation.

Other Notes	Small volumes of anti-ID1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ID1 purchase	MBS9457232 is an antibody targeting ID1. Also known as ID1 Conjugated Antibody. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ID1. It may not necessarily be applicable to this product.

NCBI GI #	341865544
NCBI GeneID	3397
NCBI Accession #	NP_002156.2
UniProt Primary Accession #	P41134
UniProt Secondary Accession #	O00651; O00652; Q16371; Q16377; Q5TE66; Q5TE67; Q969Z7; Q9H0Z5; Q9H109; A8K537; E1P5L4
UniProt Related Accession #	P41134
GenBank Nucleotide #	NM_002165
NCBI Official Full Name	Homo sapiens inhibitor of DNA binding 1, dominant negative helix-loop-helix protein (ID1), transcript variant 1, mRNA
NCBI Official Synonym Full Names	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
NCBI Official Symbol	ID1
NCBI Official Synonym Symbols	ID; bHLHb24
UniProt Protein Name	DNA-binding protein inhibitor ID-1
UniProt Synonym Protein Names	Class B basic helix-loop-helix protein 24; bHLHb24; Inhibitor of DNA binding 1; Inhibitor of differentiation 1
Protein Family	DNA-binding protein inhibitor
UniProt Gene Name	ID1
UniProt Synonym Gene Names	BHLHB24; ID; bHLHb24
UniProt Entry Name	ID1_HUMAN
NCBI Protein Information	DNA-binding protein inhibitor ID-1; class B basic helix-loop-helix protein 24; dJ857M17.1.2 (inhibitor of DNA binding 1, dominant negative helix-loop-helix protein); inhibitor of differentiation 1
NCBI Summary for ID1	The protein encoded by this gene is a helix-loop-helix (HLH) protein that can form heterodimers with members of the basic HLH family of transcription factors. The encoded protein has no DNA binding activity and therefore can inhibit the DNA binding and transcriptional activation ability of basic HLH proteins with which it interacts. This protein may play a role in cell growth, senescence, and differentiation. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

UniProt Comments for ID1	ID1: ID (inhibitor of DNA binding) HLH proteins lack a basic DNA-binding domain but are able to form heterodimers with other HLH proteins, thereby inhibiting DNA binding. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Transcription, coactivator/corepressor; DNA-binding Chromosomal Location of Human Ortholog: 20q11 Cellular Component: nucleoplasm; Golgi apparatus; nucleus Molecular Function: protein dimerization activity; protein binding; transcription factor activity Biological Process: circadian rhythm; collagen metabolic process; blood vessel endothelial cell migration; transcription, DNA-dependent; protein destabilization; heart development; negative regulation of transcription factor activity; negative regulation of transcription from RNA polymerase II promoter; regulation of angiogenesis; negative regulation of DNA binding; BMP signaling pathway; response to antibiotic; regulation of MAPKKK cascade; transforming growth factor beta receptor signaling pathway; blood vessel morphogenesis; negative regulation of osteoblast differentiation; endothelial cell morphogenesis; angiogenesis; negative regulation of transcription, DNA-dependent; negative regulation of apoptosis
Research Articles on ID1	**1.** High Id1b, generated by alternative splicing, maintains cell quiescence and confers self-renewal and cancer stem cell-like properties.
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