Technical Data Sheet

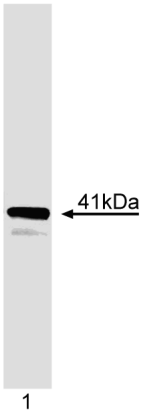
Purified Mouse Anti-Mouse ID3

Product Information

Material Number:	**556524**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	B72-1
Immunogen:	Fusion Protein Mouse Id3
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Mouse
Target MW:	13 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Id proteins were originally characterized as inhibitors of DNA binding and cell differentiation. Id1 through 4 contain an evolutionarily conserved helix-loop-helix (HLH) sequence which is critical for protein-protein interaction(s). Most HLH transcription factors contain a basic amino acid region adjacent to the HLH sequence, the bHLH sequence, which is responsible for DNA binding. bHLH transcription factors fall into 2 major groups designated class A factors, e.g.,E2.2 and E47, and class B factors, e.g., MyoD and myogenin. *In vitro* studies demonstrate distinct interaction(s) between Id proteins and bHLH transcription factors. While Id proteins contain an HLH domain, they lack the basic region which is required for DNA binding. Therefore, Id proteins are negative regulators of transcription since complexes which contain them do not bind DNA. Id proteins are variably expressed throughout the cell cycle and are regulated by phosphorylation by cyclin-cdk complexes. Thus, Id proteins play an important role in transcriptional regulation of cell cycle related genes. Overexpression of Id3 can induce apoptosis in serum-starved fibroblasts by a mechanism which is correlated to Id3-mediated cell cycle progression and is rescued by over expression of the antiapoptotic proteins Bcl-2 and Bcl-XL. Clone B72-1 recognizes mouse Id3. It does not cross react with mouse Id1 or mouse Id2. A fusion protein containing full length mouse Id3 was used as immunogen. The antibody is routinely tested by western blotting of the Id3-fusion protein. The Id3-fusion protein is observed at 43 kDa (fusion protein MW ~28 kDa and Id3 MW is ~13 kDa).



Western blot analysis of purified mouse Id3-fusion protein using clone B72-1. *Purified Mouse Anti-Mouse ID3 recognizes a ~43 kDa protein which is the predicted molecular weight of the ~28 kDa fusion protein and Mouse Id3 (~13 kDa).*

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1 mL	(none)
551011	Anti-Mouse Ig HRP Detection Kit	200 Tests	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.

References

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Hara E, Hall M, Peters G. Cdk2-dependent phosphorylation of Id2 modulates activity of E2A-related transcription factors. *EMBO J.* 1997; 16(2):332-342. (Biology)

Kadesch T. Consequences of heteromeric interactions among helix-loop-helix proteins. *Cell Growth Differ.* 1993; 4(1):49-55. (Clone-specific: Inhibition)

Langlands K, Yin X, Anand G, Prochownik EV. Differential interactions of Id proteins with basic-helix-loop-helix transcription factors. *J Biol Chem.* 1997; 272(32):19785-19793. (Biology)

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Norton JD, Deed RW, Craggs G, Sablitzky F. Id helix-loop-helix proteins in cell growth and differentiation. *Trends Cell Biol.* 1998; 8(2):58-65. (Biology)

Riechmann V, van Crüchten I, Sablitzky F. The expression pattern of Id4, a novel dominant negative helix-loop-helix protein, is distinct from Id1, Id2 and Id3. *Nucleic Acids Res.* 1994; 22(5):749-755. (Biology)

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