Technical Data Sheet

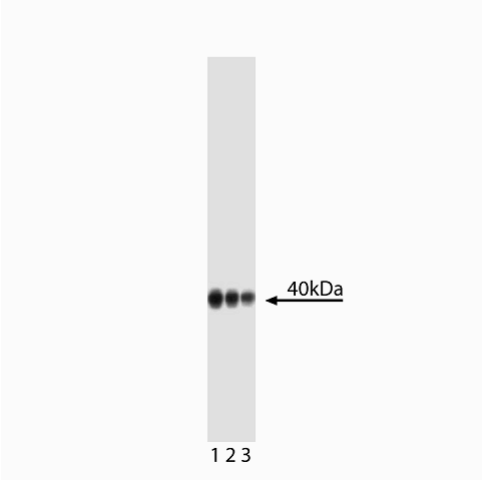
Purified Mouse Anti-Human Wnt16

Product Information

Material Number:	**552595**
Size:	50 µg
Concentration:	0.5 mg/ml
Clone:	F4-1582
Immunogen:	Human WNT16 Recombinant Protein
Isotype:	Mouse IgG2b, κ
Reactivity:	QC Testing: Human
Target MW:	40 kDa
Component:	**51-9000015**
Description:	Purified mouse anti-human WNT16 monoclonal antibody
Size:	50 µg (1 ea)
Concentration:	0.5 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Component:	**51-9000020**
Description:	697 control lysate
Size:	50 µg (1 ea)
Concentration:	1.0 mg/ml
Storage Buffer:	SDS-PAGE buffer (62mM Tris pH 6.8, 2% SDS, 0.9% b-mercaptoethanol, 0.003% bromophenol blue, 5% glycerol)

Description

The Wnt gene family comprises a large group of signaling proteins involved in developmental pathways in vertebrates, *Drosophilia, C. elegans* and other organisms. The Wnt genes were first discovered in mouse (called *int-1*) and later in *Drosophilia* (called *wingless*, or wg) where the signaling pathways were unravelled. The Wnt proteins are involved in various developmental processes including embryonic induction, generation of cell polarity and the specification of cell fate. The vertebrate Wnt glycoproteins number at least 16 members and initiate signaling by being secreted and a subset of these glycoproteins bind to a class of receptors, called Frizzled, of which 11 have been identified. Stimulation of the Wnt pathway causes the phosphorylation of Dishevelled, which inhibits glycogen synthase kinase -3β (GSK3β) and allows β-catenin to accumulate in the cytosol. β-catenin then translocates to the nucleus to form a complex with Tcf/LEF family of transcription factors to activate transcription. In unstimulated cells, β-catenin forms a complex with the proteins Axin, adenomatous polyposis coli (APC), (GSK3ß) and is unstable. Studies have shown that some members of this pathway become mutated in human cancers, such as colon carcinoma and melanoma. Futhermore, studies on the WNT-16 gene, have shown that it is activated by the E2A-Pbx fusion product in acute lymphoblastoid leukemia. Wnt16 has a predicted molecular weight of 40 kDa (SWISS-PROT:Q9UBV4).



Western blot analysis of Wnt16. *Lysate from 697 cells was probed with anti-Wnt 16 (clone F4-1582, Cat. No. 552595) at concentrations of 0.25 (lane 1), 0.125 (lane 2), and 0.063 µg/ml (lane 3). Wnt16 is identified as a band of ~40 kDa.*

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store the undiluted antibody at 4°C. Store 697 cell lysate at -20°C.

Application Notes

Application

Western blot	Routinely Tested

Recommended Assay Procedure:

Applications include western blot analysis (0.063 - 0.25 µg/ml). 697 cell lysate [50 µg (1 µg/µl)] is provided as a positive control (51-9000020).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

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.

References

Cadigan KM, Nusse R. Wnt signaling: a common theme in animal development. *Genes Dev.* 1997; 11(24):3286-3305.(Biology)
McWhirter JR, Neuteboom ST, Wancewicz EV, Monia BP, Downing JR, Murre C. Oncogenic homeodomain transcription factor E2A-Pbx1 activates a novel WNT gene in pre-B acute lymphoblastoid leukemia. *Proc Natl Acad Sci U S A.* 1999; 96(20):11464-11469.(Biology)
Polakis P. Wnt signaling and cancer. *Genes Dev.* 2000; 14(15):1837-1851.(Biology)
Taipale J, Beachy PA. The Hedgehog and Wnt signalling pathways in cancer. *Nature.* 2001; 411(6835):349-354.(Biology)
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