Technical Data Sheet

Purified Mouse Anti-CD220

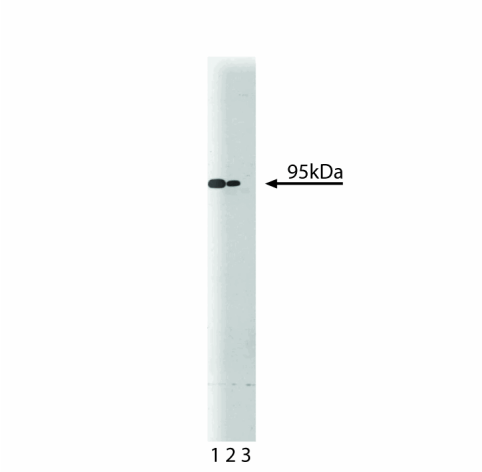
Product Information

Material Number:	**610109**
Alternate Name:	Insulin Receptor β
Size:	50 µg
Concentration:	250 µg/ml
Clone:	46/CD220
Immunogen:	Human Insulin pro-receptor β subunit 1006-1144
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Mouse Tested in Development: Rat
Target MW:	95 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

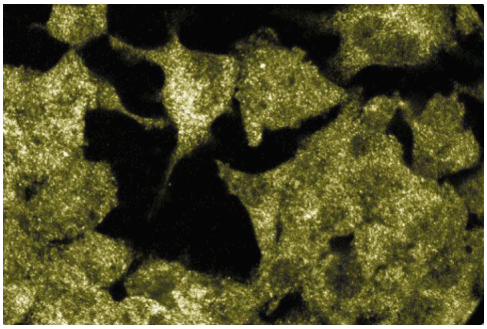
Description

Insulin Receptor (IR) is a transmembrane receptor tyrosine kinase which, upon insulin binding, initiates a cascade of events, including autophosphorylation, phosphorylation of cellular protein substrates, glucose transport, and glycogen synthesis. IR is synthesized as a large glycosylated precursor that is cleaved upon maturation into a 130 kDa α-subunit with kinase activity and a 95 kDa β-subunit. The active Insulin Receptor is a heterotetramer of homologus α and β subunits joined by disulfide bonds. Among the major cytosolic substrates of the Insulin Receptor are IRS-1 and -2, β-Adrenergic receptor, and pp15 (adipocyte lipid-binding protein, ALBP). Autophosphorylation of the IR recruits IRS-1 and -2 to the phosphotyrosines. Subsequently, the phosphorylated IRS-1 and -2 act as docking sites for other signaling proteins like PI3-Kinase, Shc, PTP1D, Nck, etc. In addition, the phosphatase LAR is tightly associated with the IR and LAR becomes activated after insulin stimulation dephosphorylating the IR and its substrates. Therefore, LAR provides a turn-off mechanism in insulin signaling.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of CD220 on a mouse liver lysate. *Lane 1: 1:250; lane 2: 1;500; lane 3: 1:1000 dilution of the anti- CD220 antibody.*



Immunofluorescence staining of PFSK-1 cells (human neuroectodermal tumor line; ATCC CRL-2060).

Preparation and Storage

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

BD Biosciences
bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

BD Biosciences

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Ebina Y, Ellis L, Jarnagin K, et al. The human insulin receptor cDNA: the structural basis for hormone-activated transmembrane signalling. *Cell.* 1985; 40(4):747-758.(Biology)

Frattali AL, Treadway JL, Pessin JE. Insulin/IGF-1 hybrid receptors: implications for the dominant-negative phenotype in syndromes of insulin resistance. *J Cell Biochem.* 1992; 48(1):43-50.(Biology)

Shumay E, Song X, Wang HY, Malbon CC. pp60Src mediates insulin-stimulated sequestration of the beta(2)-adrenergic receptor: insulin stimulates pp60Src phosphorylation and activation. *Mol Biol Cell.* 2002; 13(11):3943-3954.(Biology)

Yip CC, Jack E. Insulin receptors are bivalent as demonstrated by photoaffinity labeling. *J Biol Chem.* 1992; 267(19):13131-13134.(Biology)

Zundel W, Swiersz LM, Giaccia A. Caveolin 1-mediated regulation of receptor tyrosine kinase-associated phosphatidylinositol 3-kinase activity by ceramide. *Mol Cell Biol.* 2000; 20(5):1507-1514.(Biology)