

Technical Data Sheet

Akt/PKB Sampler Kit

Product Information

Material Number:	611437
Size:	10 µg
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Akt/Protein kinase B (PKB) is a growth-factor-regulated Ser/Thr kinase that is central to the insulin signaling pathway and induction of glycogen synthesis. Study of PKB has expedited the elucidation of a complete pathway that accounts for the insulin-induced biological effects. Ligation of the insulin receptor and activation of the insulin-receptor Tyr kinase results in the rapid recruitment of phosphoinositide 3-kinase (PI3K) into receptor-associated signaling complexes that include the insulin receptor tyrosine kinase substrate, IRS-1. Activation of PI3K results in the production of phosphatidylinositol (3,4,5) trisphosphate (PIP3), which functions as an insulin-induced second. Another enzyme in this pathway, 3-phosphoinositide-dependent protein kinase (PDK1), activates PKB in the presence of PIP3. PKBs have a C-terminal catalytic domain and an N-terminal non-catalytic pleckstrin homology (PH) domain. Binding of phosphatidylinositol (3,4) bisphosphate (PIP2) and PIP3 products to the PH domain of PKB induces its translocation to the plasma membrane where phosphorylation by PDK1 and other kinases results in PKB activation. PKB, in turn, inactivates glycogen synthase kinase (GSK3). This leads to the dephosphorylation (activation) of glycogen synthase and subsequent glycogen production. PDK1, PKB, and GSK3 regulate various physiological events via the phosphorylation of multiple intracellular targets. Other Ser/Thr kinases regulated downstream of PI 3-kinases include PKC isoforms (PKC λ/ι and ζ), p70 S6 kinase, and PKA. Thus, PKB and a number of other kinases and signaling factors are essential for intracellular transduction of insulin-induced signals and the anti-apoptotic effects of multiple survival factors.

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

Antibody	Cat#	Isotype	MW	WB	IP	IF	IH	Human	Dog	Rat	Mouse	Chick	Control	Dilution
Bad	610391	IgG2b	23	+	-	+	+	+		+	+		A431	1:500
GSK-3	610201	IgG1	46	+	nat	+	+	+	+	+	+	+	RSV-3T3	1:2500
CD220	610109	IgG1	95	+	den	+				+	+		Mouse Liver	1:250
IRS-1	611394	IgG1	180	+		+				+	+		RSV-3T3	1:1000
p70 ^{s6k}	611260	IgG1	70	+		+		+		+	+		Rat Liver	1:1000
PI3-Kinase	610045	IgG2a	85	+	nat/den	+	+	+	+	+	+	+	A431	1:2500
Akt (PKB α)	610860	IgG1	59	+	-	+	-	+	+	+	+		HCT-8	1:500
PDPK1	611070	IgG1	63	+		+		+	+	+	+		SW-13	1:250
PP2A Catalytic α	610555	IgG1	36	+	nat/den	+	+	+	+	+	+		A431	1:5000

IP: nat = native condition, den = denaturing conditions

Dilutions are recommended based on western blotting on the indicated positive control

This kit includes 10 µg of each antibody listed at a concentration of 250 µg/ml. No substitutions allowed.

Preparation and Storage

Store undiluted at -20° C.

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

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/

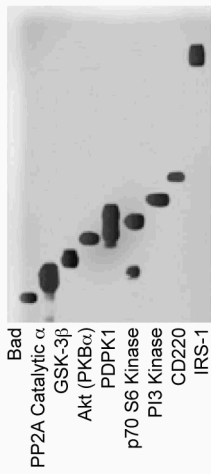
Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2006 BD



BD Biosciences



Each antibody has been tested on an appropriate positive control lysate (see table). CD220 is also known as the insulin receptor β.

Application Notes

Application

Western blot	Routinely Tested
--------------	------------------

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

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

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.