

Technical Data Sheet

Zonula Adherens Sampler Kit

Product Information

Material Number:	611446
Size:	10 µg
Concentration:	250 µg/ml
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Intercellular communication in an organism requires a correct spatial assembly to maximize the transfer of signals between cells. The type of junctions between cells determine the functional characteristics of a tissue. Zonula adherens, or adherens junctions, are a specialized form of cell-to-cell contact designed to mechanically attach the cells, through their actin cytoskeleton, to one another or to the extracellular matrix. The transmembrane linker proteins that bring the two opposing cell membranes together are the cadherins. They interact with the cytoskeleton through their associated cytoplasmic catenin proteins. In addition, cadherins are critical regulators of epithelial junction formation. Cadherin/catenin complexes associate with cortical actin bundles at both the zonula adherens and the lateral adhesion plaques. β -catenin is a 92 kDa protein that binds to the cytoplasmic tail of cadherin. Although the α - and β -catenins have been cloned, very little is known about their biochemical roles. However, a link between β -catenin and colon cancer has been described. β -catenin co-immunoprecipitates with the APC tumor suppressor protein in human colorectal tumor cell lines. The membrane associated protein pp120 (p120cas) was identified as a Tyr kinase substrate that is phosphorylated in src transformed cells or in response to growth factor stimulation. It shares structural similarity with the *Drosophila* armadillo protein and the β - and γ -catenin proteins. This is evidenced by its characteristic Arm domain that is composed of 42-amino acid motif repeats. In the cell, pp120 is localized to the cadherin/catenin cell adhesion complex. Thus, zonula adherens are critical intercellular contact sites that involve the interaction of numerous cell adhesion molecules.

Note: Investigators are advised that clone 36/E-Cadherin antibody has some degree of cross-reactivity to P-Cadherin.

Antibody	Component	Catalog# (50 µg size)	Isotype	MW	WB	IP	IF	IH	Human	Dog	Rat	Mouse	Chick	Frog	Control	Dilution
Cadherin-5	51-9001928	610251	IgG1	130 kDa	+	-	+	-	+						Human Endothelial	1:500
E-Cadherin	51-9001922	610181	IgG2a	120 kDa	+	nat	+	+	+	+	+	+			A431	1:5000
M-Cadherin	51-9001948	611100	IgG2a	130 kDa	+		+				+	+			Mouse Neonate	1:250
N-Cadherin	51-9001943	610920	IgG1	130 kDa	+		+		+			+	+		HeLa	1:2500
P-Cadherin	51-9001925	610227	IgG1	120 kDa	+	den	+	+	+		+				A431	1:250
R-Cadherin	51-9001934	610414	IgG2a	100 kDa	+	nat/den	-	-			+	+			Rat Cerebrum	1:500
α -Catenin	51-9001923	610193	IgG1	102 kDa	+	-	+	-	+	+	+	+	+	+	Human Endothelial	1:250
β -Catenin	51-9001921	610153	IgG1	92 kDa	+	nat/den	+	+	+	+	+	+	+	+	HeLa	1:500
γ -Catenin	51-9001929	610253	IgG2a	82 kDa	+	nat/den	+	-	+	+	+	+	+	+	HeLa	1:2000
Desmoglein	51-9001952	610273	IgG2b	165 kDa	+				+	+	+	+	+	+	HeLa	1:1000
p120 Catenin/pp120	51-9002040	610133	IgG1	120 kDa	+	nat/den	+	+	+	+	+	+	+	+	A431	1:1000

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.

Application Notes

Application

Western blot	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1 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/pharming/en/protocols for technical protocols.

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