Qty: 100 µg/400 µL

Rabbit anti-ZO-1

Catalog No. 61-7300

Lot No. See product label

Rabbit anti-ZO-1

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a protein concentration of 0.25 mg/mL in PBS (Ph 7.4) containing 0.1% NaN_3 as a preservative. This antibody is purified from rabbit antiserum by antigen-affinity chromatography.

POLYCLONAL ANTIBODY DESIGNATION (PAD): Z-R1

ISOTYPE: Rabbit Ig

IMMUNOGEN

A 69 kD fusion protein[1] corresponding to amino acids 463-1109 of human ZO-1 cDNA.[2] This sequence lies N-terminal to the 80 amino acid region (the α-motif) present in the a^+-isoform but absent in the a^- isoform due to alternative splicing.[1,2]

SPECIFICITY

This antibody reacts with the ZO-1α^+ and ZO-1α^- isoforms. Reactivity with *dlg* has not been characterized. No reactivity with PSD-95 or p55 has been observed on Western blots, but potential reactivity with these proteins has not been fully characterized.

REACTIVITY

The antibody reacts with human, mouse, rat, guinea pig, and canine ZO-1 on Western blots. ZO-1 has been immunoprecipitated from MDCK (dog) and Caco-2 (human) cells. Moderate reactivity is observed with chicken samples. Reactivity with other species has not been evaluated.

USAGE

Antibody	ELISA (peptide)	Immuno-precipitation	IHC (paraffin & frozen)	Western Blotting
Rb x ZO-1	+	+	+	+

Working concentrations for specific applications should be determined by the investigator. Appropriate working concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. We recommend the following ranges as starting points for this product.

Western blotting[10-12, 15, 16, 18, 20, 23]**:** 0.5-2 µg /ml
Immunoprecipitation[9, 16, 18, 20]**:** 2-5 µg/IP reaction
Immunohistochemistry[4, 8, 21]**:** 2-5 µg/ml

*** For immunofluorescence, Rb anti-ZO-1 (Mid) (Cat. No. 40-2200) and Rb anti-ZO-1 (N-term) (Cat. No. 40-2300) are recommended over Cat. No. 61-7300.**

Important: *To achieve appropriate staining results on formalin-fixed, paraffin embedded tissue sections, protease pre-treatment is required (Sigma P-5147). The recommended dilution and incubation for protease is 1-2 mg/ml at 37° C for 10 minutes. Other enzyme and HIER (Heat Induced Epitope Retrieval) pre-treatment methods may not be suitable for this particular antibody. Frozen sections have been successfully stained after fixation with acetone at 4˚C.* [21]

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

ZO-1 is a peripheral membrane protein that is associated with tight junctions (zonula occludentes) which are found on the cytoplasmic surface of epithelial and endothelial cell membranes. ZO-1 has a MW of 225 kD and is found in two isoforms that differ by the presence or absence of an 80 amino acid region known as 'motif-a'.[1] These two isoforms are the basis for determining two classes of tight junctions.[3] ZO-1 is known to interact with ZO-2. ZO-1 is homologous to *dlg*, the Drosophila tumor suppressor. Both are members of a putative signal transduction protein family whose members contain a SH3 domain and a domain homologous to the enzyme guanylate kinase.[2]

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RELATED PRODUCTS

Product	***Clone/PAD***	***Cat. No.***
Mouse anti-ZO-1	ZO-1-1A12	33-9100
Mouse anti-ZO-1-FITC	ZO-1-1A12	33-9111
Rabbit anti-ZO-2	Polyclonal	71-1400
Rabbit anti-Claudin-1	MH25	71-7800
Rabbit anti-Claudin-2	Polyclonal	51-6100
Rabbit anti-Occludin	Z-T22	71-1500
Mouse anti-E-Cadherin	HECD-1	13-1700
Mouse anti-E-Cadherin	SHE78-7	13-5700
Rat anti-E-Cadherin	ECCD-1	13-1800
Rat anti-E-Cadherin	ECCD-2	13-1900
Rat anti-N-Cadherin	NCD-2	13-2100
Mouse anti-P-Cadherin	NCC-CAD-299	13-5800
Rat anti-P-Cadherin	PCD-1	13-2000
Rabbit anti-α-Catenin	Polyclonal	71-1200
Mouse anti-β-Catenin	CAT-5H10	13-8400
Mouse anti-γ -Catenin	PG-11E4	13-8500

Product	***Conjugate***	***Cat. No.***
Goat anti-Rabbit IgG (H+L) (ZyMAX™ Grade)	Purified	81-6100
	FITC	81-6111
	TRITC	81-6114
	Cy™3	81-6115
	Cy™5	81-6116
	HRP	81-6120
	AP	81-6122
	Biotin	81-6140
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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