ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Merlin1 Antibodies

Cat. # MERL11-P Human Merlin1 control peptide # 1 **SIZE**: 100 ug
FORM: Soln Lyophilized.

Cat. # MERL11-A **Rabbit** Anti-Human Merlin1 IgG # 1 (aff pure) **SIZE**: 100 ug
FORM: Soln Lyophilized.

Na+/ H+ exchanger regulatory factor (**NHERF1**) is a PDZ domain containing adaptor protein known to bind to various receptors, channels, cytoskeletal elements and cytoplasmic signaling proteins. A 358aa mainly expressed in kidney, liver and pancrease by NHERF gene (chrm 17). And is represented in another isoform, NHERF2.
NHERF1 protein contains 2 tandem PDZ domains of approximately 90aa and a C-terminal sequence that binds several members of the ERM (ezrin-radixin-moesin) family of membrane cytoskeletal adapters. The protein plays an important role in regulation of NHE3, turnover of G-protein coupled receptors, platelet derived growth factor receptor and ion transporters such as CFTR, Na/Pi cotransporter, NaHCO3 cotransporter and Trp channels.

NHERF1 overexpression in cancers and mutations in NHERF1 targets, Merlin, the product of tumor suppressor gene, also expressed in 2 isoforms, Merlin is involved in pathogenesis of benign tumors of the human nervous system, Merlin is named for its striking similarity with ERM family which thought to link cytoskeletal components with proteins in the cell membrane, It has a binding partner called Syntenin, which is an adapter protein that couples transmembrane proteoglycans to cytoskeletal components.

Merlin, Isoforms 1 and 2 are predominant, isoforms 4, 5 and 6 are expressed moderately, and isoform 8 is found at low frequency. Isoforms 7, 9 and 10 are not expressed in adult tissues, isoforms 1& 2 are 595aa and 590aa each in human, from same gene locus on chromosome 22q12, with approximate mol. wt of 70kD, they are structurally related to moesin, ezrin and redixin but not functionally. The Merlin isoforms are widely expressed in heart, lungs, skeletal muscle and spleen. Since being a membrane stabilizing protein, defects may lead to neurofibromatosis 2 a genetic disorder characterized by bilateral vestibular schwannomas. Affected individuals generally develop symptoms of eighth-nerve dysfunction in early adulthood, including deafness and balance disorder.

Source of Antigen and Antibodies

Antigen	15-aa peptide from Human **Merlin1**; **Designation (MERL11-P, control peptide**)
Location	~C-terminus
Ab Host/type	Rabbit, Polyclonal
Ab Format	Aff pure IgG (**cat # MERL11-A**)

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of aff pure IgG at 2-20 ug/ml.

Specificity & Cross-reactivity

The Human MERL11-P control peptide is 100% identical in mouse, and rat. Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com\data\abblock.html).

General References: Joseph L. Kissil et al (2002) JBC, Vol. 277 (12), 10394-10399; Matsui, T. Maeda et al (1998) JBC, Vol. 140, 647-657; Blshop, A. L et al, (2000) Biochem. J. 348, 241-255; Rouleau GA, et al (1993) Nature 363 (6429), 515-521.

*This product is for In vitro research use only.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution — 50 ug/50 ul lyophilized powder
Buffer: 100 mM Tris, pH 7.5, 0.2% BSA contains 0.05% sodium azide
Reconstitute powder in the original vol. of water

Control/blocking peptide

100 ug/100 ul solution — 50 ug/50 ul lyophilized powder
Buffer: PBS, pH 7.5 and 0.05% sodium azide
Reconstitute powder in the original vol. of water

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.
Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Related material available from ADI

Antibodies and Peptides: NHERF isoforms, Merlin (Sch) isoforms, and Syntenin.
MERL11 rev. 40203S

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