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-20°C

#64097

Plasma Membrane Marker Antibody Sampler Kit



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For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
Phospho-Na,K-ATPase α 1 (Tyr10) (E1Y9C) Rabbit mAb	13566	20 μ l	100 kDa	Rabbit IgG
Pan-Cadherin (28E12) Rabbit mAb	4073	20 μ l	130-150 kDa	Rabbit IgG
E-Cadherin (24E10) Rabbit mAb	3195	20 μ l	135 kDa	Rabbit IgG
4F2hc/CD98 (D3F9D) XP [®] Rabbit mAb	47213	20 μ l	75-120 kDa	Rabbit IgG
Caveolin-1 (D46G3) XP [®] Rabbit mAb	3267	20 μ l	21, 24 kDa	Rabbit IgG
N-Cadherin (D4R1H) XP [®] Rabbit mAb	13116	20 μ l	140 kDa	Rabbit IgG
ENPP1 (D37B7) Rabbit mAb	5342	20 μ l	140 kDa	Rabbit IgG
Na,K-ATPase α 1 (D4Y7E) Rabbit mAb	23565	20 μ l	100 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 μ l		Goat

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

Description: The Plasma Membrane Marker Antibody Sampler Kit provides an economical means of detecting plasma membrane markers in various cell types. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

Background: The Na,K-ATPase is an integral membrane heterodimer belonging to the P-type ATPase family. Phosphorylation of Na,K-ATPase at Tyr10 has been implicated in the regulation of enzyme activity in response to hormones and neurotransmitters (1). Cadherins are a superfamily of transmembrane glycoproteins that contain cadherin repeats of approximately 100 residues in their extracellular domain. Cadherins mediate calcium-dependent cell-cell adhesion and play critical roles in normal tissue development. The classic cadherin subfamily includes N-, P-, R-, B-, and E-cadherins, as well as about ten other members that are found in adherens junctions, a cellular structure near the apical surface of polarized epithelial cells (2). 4F2hc is a transmembrane protein that belongs to the solute carrier family. 4F2hc forms heterodimeric complexes with various amino acid transporters, such as LAT1 and LAT2, and regulates uptake of amino acids (3). The 21-24 kDa integral proteins, caveolins, are the principal structural components of the cholesterol/sphingolipid-enriched plasma membrane microdomain caveolae. Three members of the caveolin family (caveolin-1, -2, and -3) have been identified with different tissue distributions (4). Ectonucleotide pyrophosphatase-phosphodiesterase 1 (ENPP1) is a single-pass, type II transmembrane protein primarily involved in ATP hydrolysis at the plasma membrane. ENPP1 plays important roles in bone mineralization and soft tissue calcification (5).

Specificity/Sensitivity: Each antibody in the Plasma Membrane Marker Antibody Sampler Kit detects endogenous levels of its target protein. Phospho-Na,K-ATPase α 1 (Tyr10) (E1Y9C) Rabbit mAb recognizes endogenous levels of Na,K-ATPase α 1 protein only when phosphorylated at Tyr10, and cross-reacts with an induced 75-80 kDa doublet of unknown origin. Pan-Cadherin (28E12) Rabbit mAb detects endogenous levels of total cadherin proteins. 4F2hc/CD98 (D3F9D) XP[®] Rabbit mAb recognizes endogenous levels of total 4F2hc/CD98 protein, and is predicted to detect multiple isoforms of 4F2hc/CD98.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to residues surrounding Pro12 of human Na,K-ATPase α 1, Pro780 of human E-cadherin, Arg526 of human N-cadherin, Val509 of human 4F2hc/CD98, Glu20 of human caveolin-1, Leu520 of human ENPP1, a conserved region of human N-, R-, E- and P-cadherin proteins, or a synthetic phosphopeptide corresponding to residues surrounding Tyr10 of human Na,K-ATPase α 1 protein.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibodies.

Please visit www.cellsignal.com for validation data and a complete listing of recommended companion products.

Background References:

- (1) Therien, A.G. and Blostein, R. (2000) *Am J Physiol Cell Physiol* 279, C541-66.
- (2) Wheelock, M.J. and Johnson, K.R. (2003) *Annu Rev Cell Dev Biol* 19, 207-35.
- (3) Kanai, Y. et al. (1998) *J Biol Chem* 273, 23629-32.
- (4) Okamoto, T. et al. (1998) *J Biol Chem* 273, 5419-22.
- (5) Harmey, D. et al. (2004) *Am J Pathol* 164, 1199-209.

U.S. Patent No. 5,675,063.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.