

Product Specification Sheet

African clawed frog Uroplakin-3a (UPK3A) Antibodies

Rabbit Anti-African clawed frog UPK3A (UPK3A-phosphor Y249) IgG (aff pure) ☐ Cat. # AB-23007-A **SIZE**:100 ul □ Cat. # AB-23007-P African clawed frog UPK3A (UPK3A-phosphor Y249) peptide **SIZE**: 100 ug ☐ Cat. # AB-23007-CP African clawed frog UPK3A (non-phosphor) control peptide **SIZE**: 100 ug

Uroplakins (UPK) are integral membrane proteins that form 2dimensional crystalline arrays termed urothelial plaques that cover more than 90% of the apical urothelial surface. The asymmetric unit membrane (AUM) forms the apical plaques of urothelium and is believed to strengthen the urothelial apical surface and prevent the cells from rupturing during bladder distention. The 4 major conserved integral membrane proteins of the AUM are UPK1A, UPK1B, UPK2, and UPK3A. Uroplakin (UP) 3a. UPIIIa protein, is a major uroplakin with a potential cytoplasmic signaling domain, in bacterial invasion and apoptosis and is critical for urinary tract development and function. In response to FimH adhesin binding, the UPIIIa cytoplasmic tail undergoes phosphorylation on a specific threonine residue by casein kinase II, followed by an elevation of intracellular calcium. Pharmacological inhibition of these signaling events abrogates bacterial invasion and urothelial apoptosis in vitro and in vivo. Studies show that in Xenopus laevis, sperm-egg interaction promotes partial proteolysis and/or tyrosine phosphorylation of uroplakin III (UPIII) and the tyrosine kinase Src, which both localize to the cholesterol-enriched egg membrane microdomains (MDs).

Protein Function Component of the asymmetric unit membrane (AUM); a highly specialized biomembrane elaborated by terminally differentiated urothelial cells. May play an important role in AUMcytoskeleton interaction in terminally differentiated urothelial cells. It also contributes to the formation of urothelial glycocalyx which may play an important role in preventing bacterial adherence

Subcellular Location Endoplasmic reticulum membrane; Singlepass type I membrane protein Protein name Uroplakin-3a, Uroplakin III

Gene name UPK3A Synonyms Upk3

Similarity Belongs to the uroplakin-3 family.

Source of Antigen and Antibodies

Antigen	15-aa peptides of African clawed frog Uroplakin-3a (UPK3A); (protein accession # Q75W53) (designated control Upk3a-phosphor peptide AB-23007-P) conjugated to KLH; Epitope location, C terminal and non-phosphor control peptide designated as AB-23007-CP.
Ab Host/type	Rabbit, polyclonal Aff pure IgG (cat # AB-23007-A) purified over the antigen column
2-ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available
-ve control	# 20009-1, Rabbit (non-immune) IgG,
	purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

□ 100 ug/100ul □ solution □ lyophilized powder

Supplied in Buffer: PBS+0.1% BSA Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

□ 100 ug/100 ul □ solution □ Iyophilized powder Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C.

at -20°C or below in suitable aliquots after Long-term: reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: not tested. We recommend the use of affinity pure antibody at 2-20 ug/ml.

SpecifiUPK3Ay & Cross-reactivity

AB-23007-P is phosphorylated at Y249. The control immunogenic phosphor peptide AB-23007-P and non-phospho peptide AB-23007-CP are available to confirm the specificity of antibodies. The control peptides, 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.

General References: Yuasa T., (1998). Jpn J Cancer Res 89 (9): 879-82. Garcia-Espana A., (2006). Mol. Phylogenet. Evol. 41:355-367.1 Thumbikat P., (2009. PLoS Pathog 5(5): e1000415.2 Sato K., (2014). Development. 141, 1705-1714.

*This product is for In vitro research use only.

Related materials available from ADI

Antibodies:

ReadyBlot Kidney Protein Explorer-Study distribution of protein in various regions of the African clawed frog/rat kidney using the premade protein blots; Western blot recycling kit-Use the same blot for WNK1-4.

AB-23007-A-P 130822VP