

Product datasheet for **RN206216**

Ahcyl1 (NM_001108561) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ahcyl1 (NM_001108561) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Ahcyl1
Synonyms:	IRBIT
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >RN206216 representing NM_001108561
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAAGAGTTACCAAATTCCTACTAAGACTGGCCGGAGATCCTTGTCTCGCTCCATCTCACAGTCT
 CCACAGACAGCTACAGTTCAGCTGCATCCTATACAGATAGCTCTGATGATGAGGTTTCCCCCGAGAGAA
 GCAGCAAACCAACTCAAAGGGCAGCAGCAATTTCTGTGTGAAGAACATCAAGCAGGCAGAGTTTGGACGC
 CGGGAGATTGAGATTGCAGAGCAAGACATGTCTGCTCTGATTTCACTCAGGAAACGTGCTCAGGGAGAGA
 AGCCTTTGGCTGGTGCTAAAATAGTGGCTGTACACACATCACAGCCCAGACAGCGGTATTGATTGAGAC
 ACTTTGTGCCCTGGGGCTCAGTCCGCTGGTCTGCCTGCAACATCTATTCAACTCAGAATGAGGTAGCT
 GCAGCACTGGCTGAGGCTGGAGTGCAGTGTGCTTGAAGGGCGAGTCAGAAGATGATTTCTGGTGGT
 GCATTGACCGCTGTGCAACATGGATGGTGGCAGGCTAACATGATCCTGGATGATGGGGGAGACTAAC
 CCACTGGGTTTATAAGAAGTATCCAACGTGTTAAGAAGATCCGAGGCATTGTGAAGAGAGCGTGACT
 GGTGTTACAGGCTGTATCAGCTCTCAAAGCTGGGAAGCTCTGTGTTCCAGCCATGAATGTCAATGATT
 CTGTTACCAAACAGAAGTTTGATAAATTGTACTGCTGCCGAGAATCCATTTTGGATGGCCTGAAGAGGAC
 CACAGATGTGATGTTTGGTGGGAAACAGGTGGTGGTGTGTGGCTATGGTGAAGTAGGAAAGGGCTGCTGT
 GCTGCTCTCAAGGCCCTTGGAGCAATTGTCTACATCACAGAAATTGACCCCATCTGTGCTCTGCAGGCCCT
 GCATGGATGGGTTCCGGGTGGTGAAGCTGAATGAAGTCATCCGGCAGGTGGACGTTGAATAAAGTTCAC
 AGGAAATAAGAATGTAGTGACCCGGGAGCACTGGACCGAATGAAAAATAGTTGCATTGTATGTAATATG
 GGCCATTCCAACACAGAAATTGATGTGACCAGCCTCCGCACTCCAGAGCTAACATGGGAGCGCGTACGTT
 CTCAGGTGGACCATGTCATCTGGCCTGATGGCAAGCGGGTCTGCTTCTAGCAGAGGGTCTTTACTCAA
 TTTGAGCTGCTCCACAGTTCCTACCTTTGCTTTCCATCACGGCTACAACACAGGCTTTGGCACTGATA
 GAACCTTTATAATGCACCAGAAGGACGCTACAAACAGGATGTGACTTGGCTTCTAAGAAAATGGATACTA
 ATGGACGTATTACAATGACCAGTCCACACGAACCACGCAACTCTAATAGAGTATTTTTAAGATAACTTT
 TATTTTCTTCTTACTTTCTTT**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001108561

Insert Size: 1428 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001108561.1](#), [NP_001102031.1](#)

RefSeq Size: 3435 bp

RefSeq ORF: 1428 bp

Locus ID: 362013

UniProt ID: [B5DFN2](#)

Cytogenetics: 2q34

Gene Summary: Multifaceted cellular regulator which coordinates several essential cellular functions including regulation of epithelial HCO₃⁻ and fluid secretion, mRNA processing and DNA replication. Regulates ITPR1 sensitivity to inositol 1,4,5-trisphosphate competing for the common binding site and acting as endogenous 'pseudoligand' whose inhibitory activity can be modulated by its phosphorylation status. In the pancreatic and salivary ducts, at resting state, attenuates inositol 1,4,5-trisphosphate-induced calcium release by interacting with ITPR1 (By similarity). When extracellular stimuli induce ITPR1 phosphorylation or inositol 1,4,5-trisphosphate production, dissociates of ITPR1 to interact with CFTR and SLC26A6 mediating their synergistic activation by calcium and cAMP that stimulates the epithelial secretion of electrolytes and fluid (By similarity). Also activates basolateral SLC4A4 isoform 1 to coordinate fluid and HCO₃⁻ secretion (By similarity). Inhibits the effect of STK39 on SLC4A4 and CFTR by recruiting PP1 phosphatase which activates SLC4A4, SLC26A6 and CFTR through dephosphorylation (By similarity). Mediates the induction of SLC9A3 surface expression produced by Angiotensin-2 (PubMed:20584908). Depending on the cell type, activates SLC9A3 in response to calcium or reverses SLC9A3R2-dependent calcium inhibition. May modulate the polyadenylation state of specific mRNAs, both by controlling the subcellular location of FIP1L1 and by inhibiting PAPOLA activity, in response to a stimulus that alters its phosphorylation state. Acts as a (dATP)-dependent inhibitor of ribonucleotide reductase large subunit RRM1, controlling the endogenous dNTP pool and ensuring normal cell cycle progression (By similarity). In vitro does not exhibit any S-adenosyl-L-homocysteine hydrolase activity (By similarity). [UniProtKB/Swiss-Prot Function]