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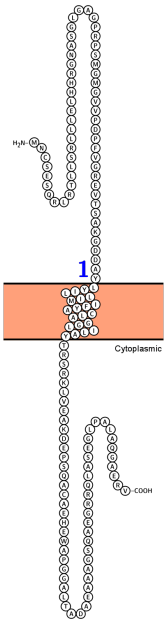
Potassium voltage-gated channel subfamily E regulatory beta subunit 5

Organism: Homo sapiens (Human) | **Gene names:** KCNE5, AMMECR2, KCNE1L



Entry: Q9UJ90

Mass: 14.993 Da

Transmembrane: 1

Subcellular location: Membrane {ECO:0000269|PubMed:20533308}, Single-pass type I membrane protein {ECO:0000305}.

Cofactor: -

Extinction coefficient: 0.773

Isoelectric Point: 5.9

PubMed ID: 10493825, 15489334, 12324418, 20533308, 12011158, 16054468, 18313602, 21493962

Family: -

Function:

Potassium channel ancillary subunit that is essential for generation of some native K(+) currents by virtue of formation of heteromeric ion channel complex with voltage-gated potassium (Kv) channel pore-forming alpha subunits. Functions as an inhibitory beta-subunit of the repolarizing cardiac potassium ion channel KCNQ1. {ECO:0000269|PubMed:12324418}.

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Data from experiment(s): Hek293 membrane pellets

DIBMA 10	No data	DIBMA 12	No data
DIBMA Glycerol	No data	DIBMA Glucosamine	No data
Amphipol 17	No data	Amphipol 18	No data
AASTY 6-45	No data	AASTY 11-45	No data
AASTY 6-50	No data	AASTY 11-50	No data
AASTY 6- 55	No data	AASTY 11- 55	No data
SMALP 502-E	No data	SMALP 140-I	No data
SMALP 300	No data	SMALP 200	No data
SMALP 140	No data	DDM	No data
DM	No data	LMNG	No data
Fos-12	No data	Digitonin-A	No data
RIPA	No data		

Data from experiment(s): Hek293 membrane pellets 1 %

DIBMA 10	No data	DIBMA 12	No data
DIBMA Glycerol	No data	DIBMA Glucosamine	No data
Amphipol 17	No data	Amphipol 18	No data
AASTY 6-45	No data	AASTY 11-45	No data
AASTY 6-50	No data	AASTY 11-50	No data
AASTY 6- 55	No data	AASTY 11- 55	No data
SMALP 502-E	No data	SMALP 140-I	No data
SMALP 300	No data	SMALP 200	No data
SMALP 140	No data	DDM	No data
DM	No data	LMNG	No data
Fos-12	No data	Digitonin-A	No data
RIPA	No data		

Involvement in disease:

Alport syndrome with mental retardation, midface hypoplasia and elliptocytosis (ATS-MR) [MIM:300194]: An X-linked contiguous gene deletion syndrome characterized by glomerulonephritis, sensorineural hearing loss, mental retardation, midface hypoplasia and elliptocytosis. {ECO:0000269|PubMed:12011158}. Note=The gene represented in this entry may be involved in disease pathogenesis.

Binding site:

-

Tissue specificity:

Highly expressed in heart, skeletal muscle, brain, spinal cord and placenta. {ECO:0000269|PubMed:10493825}.

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3D (X-ray crystallography):

-

Pharmaceutical use:

-

AS sequence:

MNCSESQRLRTLLSRLLLELHHRGNASGLGAGPRPSMGMGVVPDPFVGREVTSAKGDDAYLYILLIMIFYACLAGGLILAYTRSR
KLVEAKDEPSQACAEHEWAPGGALTADAEAAAGSQAEGRRQLASEGLPALAQGAERV

Creditnotes:

The protein visualizations are generated with the help of Protter:
Omasits, U., Ahrens, C.H., MÃ¼ller, S., Wollscheid, B. “Protter: interactive protein feature visualization and integration with experimental proteomic data”. *Bioinformatics*. 2014 Mar 15; **30**(6):884-6. doi: 10.1093/bioinformatics/btt607.

IP and extinction coefficients are gathered from Protparam by ExPASy:
Gasteiger, E., Hoogland, C., Gattiker, A., Duvaud, S., Wilkins, M.R., Appel, R.D., Bairoch, A. “Protein Identification and Analysis Tools on the ExPASy Server”. (In) *John M. Walker (ed): The Proteomics Protocols Handbook*, Humana Press (2005). pp. 571-607

The basic knowledge is found on UniProt:
The UniProt Consortium. “UniProt: the universal protein knowledgebase in 2021”. *Nucleic Acids Res*. **49**:D1 (2021)