

Kir 1.1 b - Protein-ATP-sensitive inward rectifier potassium channel 1

Product specification

Acronym: Kir 1.1 b
Class: Channel
Origin: Mouse
Molecular weight: 42.7 kDa
Application:

Purity: >40%
Activity: to be tested
Length: 372
TMD: 2
Biological function:

Product description

Protein-ATP-sensitive inward rectifier potassium channel plays, in the kidney, a major role in potassium homeostasis. Inward rectifier potassium channels are characterized by a greater tendency to allow potassium to flow into the cell rather than out of it. Their voltage dependence is regulated by the concentration of extracellular potassium; as external potassium is raised, the voltage range of the channel opening shifts to more positive voltages. The inward rectification is mainly due to the blockage of outward current by internal magnesium. This channel is activated by internal ATP and can be blocked by external barium.

Protein Source: UniProtKB – O88335 (KCNJ1_MOUSE).

Fig.1: AA sequence of ATP-sensitive inward rectifier potassium channel 1

10	20	30	40	50
MFKHLRWFV	THIFGRSRQR	ARLVSEIDGRC	NIEFGNVLLQ	SRFIFFFVDIW
60	70	80	90	100
TTVLDLRWRY	KMTVFITAEI	GSWELEFGLLW	YVVAYVHEDL	PEFYPPDNRT
110	120	130	140	150
PCVENINGMT	SAPLPSLETQ	VTIGYGFREFV	TEQCATAIPL	LIFQGIIGVI
160	170	180	190	200
INSMCGAIL	AKISRPKKRA	KTIIFSKNAV	ISKRGKLCCL	LIRVANLRKS
210	220	230	240	250
LLIGSHIYGK	LLKTTITPEG	ETIILDQNTI	NFVVDAGNEM	LFFISPLTIY
260	270	280	290	300
HIIDHNSPFF	HMAAETPLSQQ	DFKIVVFLDQ	IVESTSAYIQ	VRTSYIPKRV
310	320	330	340	350
LWGYRFVDIV	SKTRECKYRV	DFHNECKTVE	VETPHCAMCL	YNERDARARM
360	370			
IRGYDNENFV	LGEVDETDDE	QM		

Affinity Tag: Histidine tag fused to the N-terminal end of the protein.

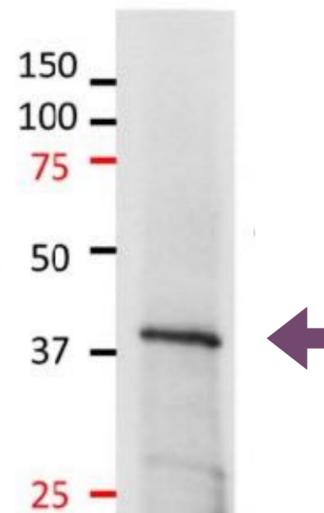
Production conditions: Kir1.1b is expressed in a cell-free expression system in the presence of lipid vesicles. 100 µg can be produced and qualified in about 1 week.

Quality analysis

Purity: Typically > 40% as determined by SDS-Page and Coomassie Blue staining.

Purification procedure: As standard, Kir1.1 b proteoliposomes are purified on a sucrose gradient. Further purification steps can be added if required.

Fig.2: Western Blot identification of Kir1.1 b in proteoliposomes after sucrose gradient purification.



Formulation

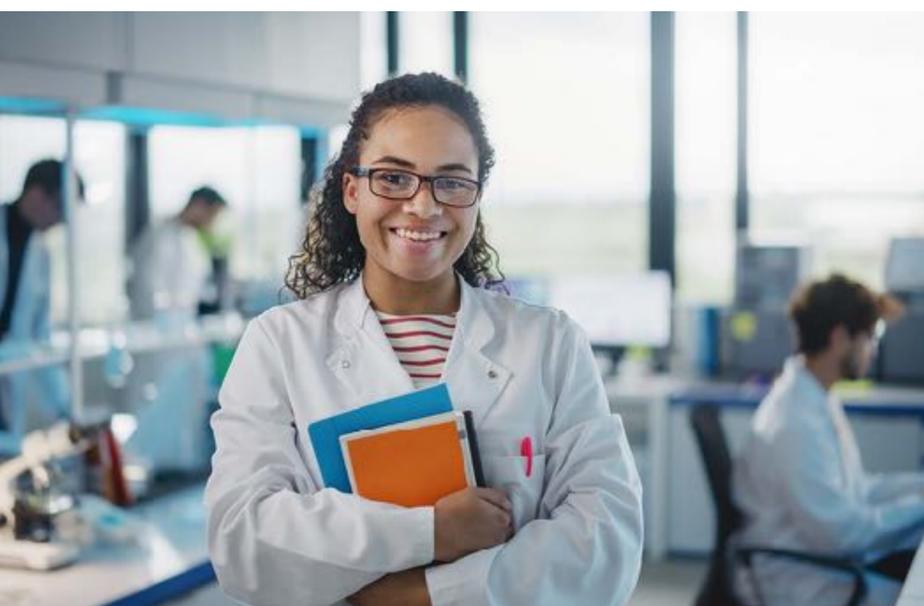
Buffer: Available in Tris 50mM, pH 7.5. Other buffers or customized formulation can be provided upon request.

Customized Hydrophobic matrix: Customized formulation with specific lipids like PEGylated or biotinylated lipids can be used upon request, as well as targeting molecules.

Storage/Stability: Store at +4°C for up to one week or several months at -80°C. Aliquot for storage. Do not freeze-thaw after aliquoting.

Use restrictions: For life science research use only.

Available sizes: 10µg, 20µg, 100 µg, 200 µg, 500 µg, bulk



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