AQP4 Protein, Mouse (Cell-Free, His)

Cat. No.:	HY-P702216
Synonyms:	Aquaporin-4; Mercurial-insensitive water channel; MIWC; WCH4
Species:	Mouse
Source:	E. coli Cell-free
Accession:	P55088 (M1-V323)
Gene ID:	11829
Molecular Weight:	Observed band size: Monomer: 38 kDa Dimer:76 kDa It is speculated that the proteinforms a dimeric structure.

PROPERTIES

AA Sequence	MSDGAAARRW GKCGHSCSRE SIMVAFKGVW TQAFWKAVSA EFLATLIFVL LGVGSTINWG GSENPLPVDM VLISLCFGLS IATMVQCFGH ISGGHINPAV TVAMVCTRKI SIAKSVFYII AQCLGAIIGA GILYLVTPPS VVGGLGVTTV HGNLTAGHGL LVELIITFQL VFTIFASCDS KRTDVTGSIA LAIGFSVAIG HLFAINYTGA SMNPARSFGP AVIMGNWANH WIYWVGPIMG AVLAGALYEY VFCPDVELKR RLKEAFSKAA QQTKGSYMEV EDNRSQVETE DLILKPGVVH VIDIDRGEEK KGKDSSGEVL SSV
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of 20 mM Tris-HCl, 0.15 M NaCl, 0.05% Brij-78, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	AQP4 Protein forms a water-specific channel, crucial for brain water homeostasis and glymphatic solute transport. It plays a vital role in the normal rate of water exchange across the blood-brain interface and is necessary for cerebrospinal fluid influx into the brain cortex and parenchyma, along with drainage of interstitial fluid. AQP4 is essential for the clearance of solutes, including soluble beta-amyloid peptides, from the brain interstitial fluid. Additionally, it plays a redundant role in urinary water homeostasis and concentrating ability. Existing as a homotetramer, AQP4 tetramers can create oligomeric arrays in membranes, with varying sizes between tissues. Interactions among AQP4 oligomeric arrays in adjacent cells contribute to cell-cell adhesion, and it is part of a complex containing MLC1, TRPV4, HEPACAM, and ATP1B1.

Caution: Product has not been fully validated for medical applications. For research use only.

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