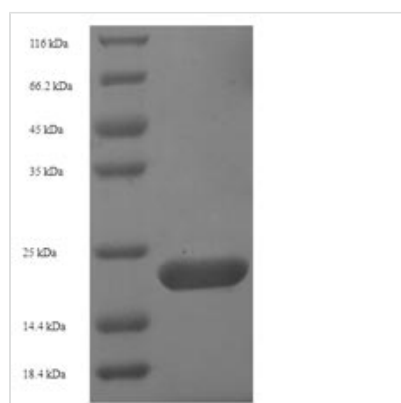




Recombinant Human Aquaporin-4 (AQP4), partial

Product Code	CSB-EP001964HU
Relevance	Forms a water-specific channel. Osmoreceptor which regulates body water balance and mediates water flow within the central nervous syst.
Abbreviation	Recombinant Human AQP4 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P55087
Alias	Mercurial-insensitive water channel ;MIWCWCH4
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	CPDVEFKRRFKEAFSKAAQQTKGSYMEVEDNRSQVETDDLILKPGVVHVIDVD RGEEKKGKDKQSGEVLSSV
Research Area	Transport
Source	E.coli
Target Names	AQP4
Expression Region	253-323aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	24.0kDa
Protein Length	Cytoplasmic Domain

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description



The recombinant human AQP4 protein is a fusion protein consists of the human AQP4 protein (253-323aa) partnered with the N-terminal 6xHis-SUMO tag. It was produced in the E.coli. This recombinant AQP4 protein's purity is greater than 90% determined by SDS-PAGE. After electrophoresis, there is a 22 kDa protein band presented on the gel.

Aquaporin 4 (AQP4) is one of the three types of aquaporins (AQPs) that have been described in astrocytes. AQP4 protein is the predominant aquaporin found in brain and has an important role in brain water homeostasis. Its expression is mainly confined to astrocytes, but its distribution and levels of expression vary between different brain regions. In the cerebral cortex, AQP4 expression is particularly abundant in astrocytes aligning blood vessels. Recent researches found the correlations of AQP4 expression and polymorphism with diabetic retinopathy. Upregulation of aqp4 improves blood–brain barrier integrity and perihematoma edema following intracerebral hemorrhage. One findings suggested that anti-AQP4 autoantibodies promote ATP release from astrocytes and induce mechanical pain in rats. Nevertheless, the predominant pattern of AQP4 in the central nervous system is highly polarized, especially in astrocytes in the proximity of or in contact with blood vessels, the ependymal layer, and pia.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.