

VDAC1 - Voltage-Dependent Anion Channel 1

Product specification

Acronym: VDAC1

Class: Ion channel

Origin: Human

Molecular weight: kDa

Application: Screening & display technologies.

Purity: >90%

Activity:

Length:

TMD:

Biological function:

Product description

VDAC (Voltage-Dependent Anion Channel) is a mitochondrial porin located in the outer mitochondrial membrane (OMM). This protein consists of a transmembrane β -barrel with an N-terminal α -helix. VDAC is responsible for the exchange of adenine nucleotides, Ca^{2+} and other metabolites across the mitochondrial membrane, it also has binding sites for glycerol, hexokinase II, creatine kinase and Bcl-2 family members. VDAC plays a central role in the increase of mitochondrial membrane permeability as part of apoptosis.

Protein Source: The HuVDAC1 wild type protein (Human VDAC isoform 1)

Fig.1: AA sequence of huVDAC1 protein

10	20	30
HHHHHHAVPP	TYADLGKSAR	DVFTKGYGFG
40	50	60
LIKLDLTKTS	ENGLFTSSG	SANTETTKVT
70	80	90
GSLETKYRWT	EYGLTFTEKW	NTDNTLGTEI
100	110	120
TVEDQLARGL	KLTFDSSFSP	NTGKKNKIK
130	140	150
TGYKREHINL	GCDMDFDIAG	PSIRGALVLG
160	170	180
YEGWLAGYQM	NFETAKSRVT	QSNFAVGYKT
190	200	210
DEFQLHTNVN	DGTEFGGSYI	QKVNKKLETA
220	230	240
VNLAWTAGNS	NTRFGIAAKY	QIDPDACFSA
250	260	270
KVNNSLIGL	GYTQTLKPGI	KLTLALLDG
280	288	
KNVNAGGHKL	GLGLEFQA	

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

Production conditions: hVDAC1 is expressed in a cell-free expression system, in the presence of detergent. 1 mg can be produced and qualified in about 1 week.

Quality analysis

Purity: Typically > 90% as determined by SDS-Page and Coomassie Blue staining.

Purification procedure: hVDAC are purified using paramagnetic precharged nickel particles. Further purification can be performed if required.

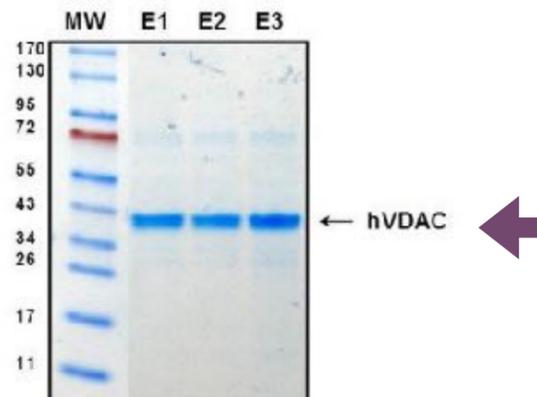


Fig.2: Soluble hVDAC recovered by elution with imidazole

Formulation

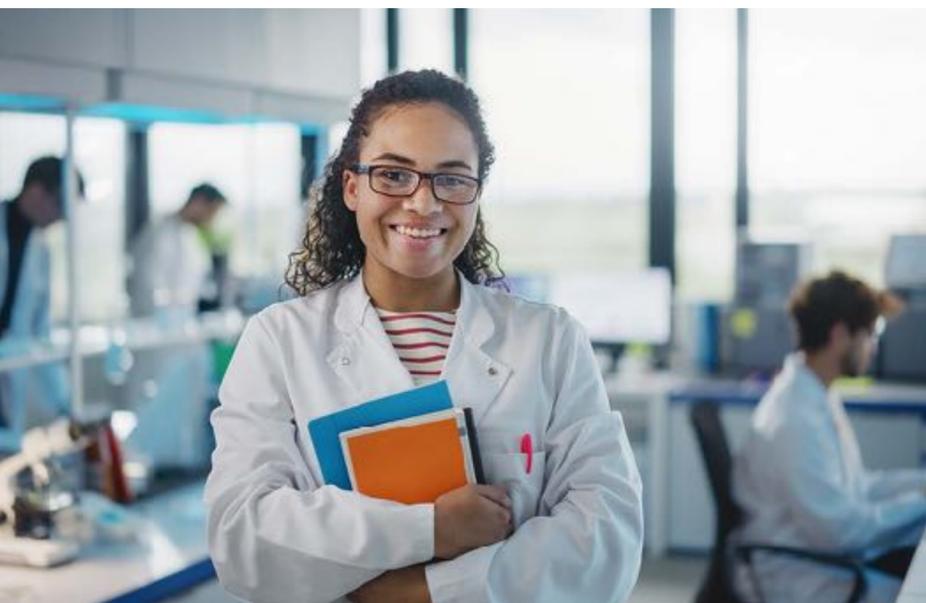
Buffer: Available in Tris 50mM, pH 7.5. Other buffers or customized formulation can be provided upon request.

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, 25 µg, 100 µg, bulk



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