

Sensory rhodopsin-2 (*Halobacterium salinarum*)

Lot # 600433-3023-024

Product	Catalog No.	Package size
Sensory rhodopsin-2_Hs (100 ug)	28921	1 x 100 µg

Product Description

Alternative names	SR-2, HsSRII
UniProt number	P71411
Protein class	7-transmembrane protein
Organism	<i>Halobacterium salinarum</i> S9
Sequence	wild-type sequence, full-length, 6x His-tag
	MALTTWFWVGVGMLAGTVLPIRDCIRHPSHRRYDLVLAGITGLAAIAYTTMGLGITATTVGDR TVYLARYIDWLVTTPILIVLYLAMLARPGHRTSAWLLAADVFVIAAGIAAALTTGVQRWLVFAVGA AGYAAALLYGLLGTLPALGDDPRVRSFLVTLRNITVVLWTLYPVWLLSPAGIGILQTEMYTIVVV YLDFISKVAFVAVLGDGAVSRLVAADAAAPATAEPTPDGD HHHHHH
Affinity tags	His-tag (C-terminus)
Size	243 amino acids 26,103 Da
Absorbance	Extinction coefficient at 497 nm: 48,000 M ⁻¹ cm ⁻¹
Function	Photoreceptor protein undergoing a photocycle, Retinal protein, photophobic phototaxis receptor
Literature reference	Mironova OS, Efremov RG, Person B, Heberle J, Budyak IL, Büldt G, Schlesinger R. (2005) Functional characterization of sensory rhodopsin II from <i>Halobacterium salinarum</i> expressed in <i>Escherichia coli</i> . FEBS Lett. Jun 6;579(14):3147-51

Quality Control

Purity	>98% as determined by SDS-PAGE, see Figure 1
Activity	Binding of ligand all-trans retinal, covalently bound to a lysine residue. Evaluation of UV-VIS spectrum: absorbance ratio 280 nm / 497 nm = 1.7, see Figure 2

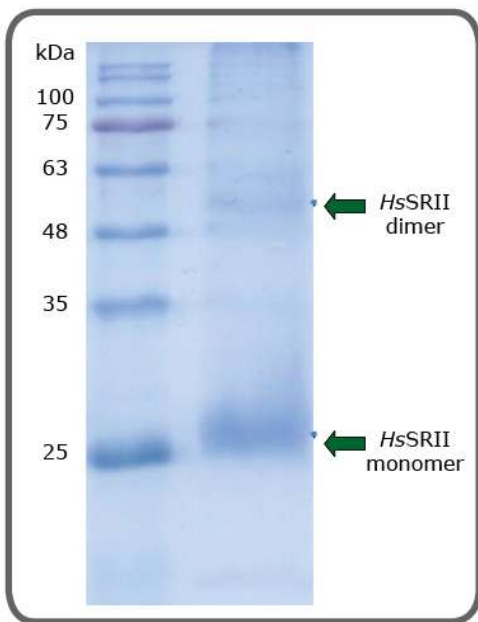


Fig. 1: SDS-PAGE of SR-2 from *H. salinarum*.

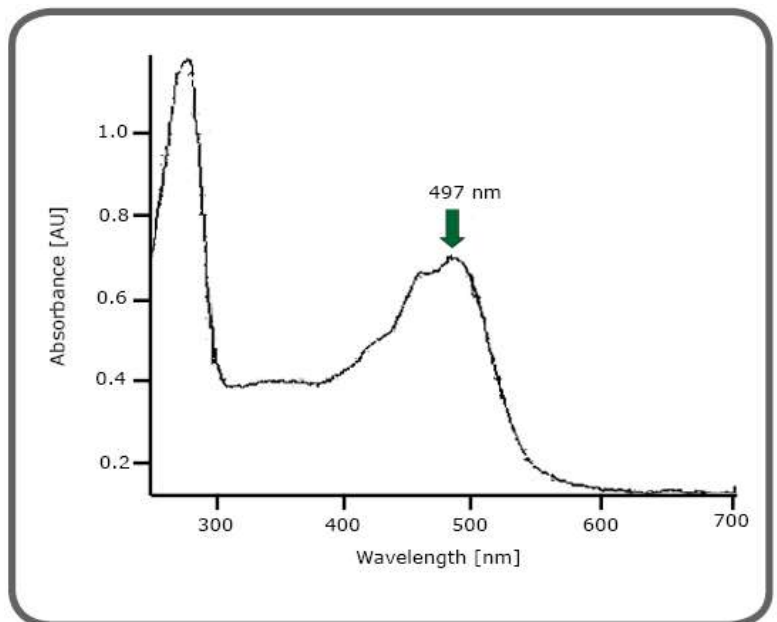


Fig. 2: Absorbance spectrum of SR-2 from *H. salinarum*.

Preparation:

Expression system	<i>E. coli</i>
Purification	PureCube Ni-NTA Agarose
Buffer	4 M NaCl, 50 mM MES pH 6.0, 0.03% dodecyl maltoside (DDM)
Concentration	4.6 mg/mL
Volume	23 μ L per 100 μ g aliquot

Applications

- SDS-PAGE
- Western Blot
- Protein Crystallization
- Biochemical and biophysical analyses

Shipping & Storage

Shipping conditions	Dry ice
Storage conditions	-80°C. Avoid freeze-thaw cycles
Important: Sensory rhodopsin is light-sensitive and must be stored in the dark.	

Disclaimer: Our products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

Proteins are our passion.