

Aequorin : Ca ²⁺ -Binding Photoprotein	
Cat. No.:	T-001
Product Code:	AQ
Source:	Recombinant protein expressed in <i>E. coli</i> .
Form:	Liquid
Constituents:	10 mM Tris-HCl (pH 7.5) – 2 mM EDTA – 1.2 M (NH ₄) ₂ SO ₄
Purity:	> 95% (SDS-PAGE under reducing conditions)
Preservative:	None
Recommended Storage:	Store at -80 °C upon receipt.
Shipping condition:	Shipping with dry ice.
Size:	50 µg
Protein concentrations:	1 mg/mL (Bradford protein assay)
Remarks:	Avoid contamination of Ca ²⁺ .
Uses:	Determination of Ca ²⁺ concentrations by luminescence intensity.
References:	1) Inouye, S., Noguchi, M., Sakaki, Y., Takagi, Y., Miyata, T., Iwanaga, S., Miyata, T. and Tsuji, F.I. (1985) Cloning and sequence analysis of cDNA for the luminescent protein aequorin. <i>Proc. Natl. Acad. Sci. USA</i>, 82: 3154-3158. 2) Inouye, S., Aoyama, S., Miyata, T., Tsuji, F.I. and Sakaki, Y. (1989) Overexpression and purification of the recombinant Ca²⁺-binding protein, apoaquorin. <i>J. Biochem.</i> 105: 473-477. 3) Inouye, S., Zenno, S., Sakaki, Y. and Tsuji, F.I. (1991) High-level expression and purification of apoaquorin. <i>Protein Expr. Purif.</i> 2: 122-126. 4) Shimomura, O. and Inouye, S. (1999) The <i>in situ</i> regeneration and extraction of recombinant aequorin from <i>Escherichia coli</i> cells and the purification of extracted aequorin. <i>Protein Expr. Purif.</i> 16: 91-95. 5) Head, J. F., Inouye, S., Teranishi, K. and Shimomura, O. (2000) The crystal structure of the photoprotein aequorin at 2.3 Å resolution. <i>Nature</i>, 405, 372-376.
Laboratory Reagent For Research Use Only	
Not for resale without prior written consent from JNC Corporation.	

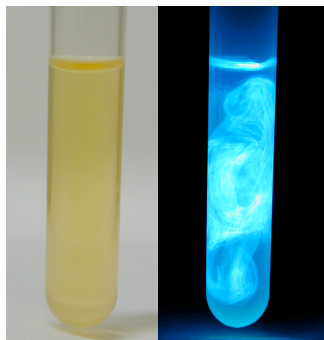
Supplier	Contact us
JNC CORPORATION Shin Otemachi Bldg. 9F 2-2-1 Otemachi, Chiyoda-ku, Tokyo 100-8105 URL http://www.jnc-corp.co.jp	JNC Corporation, Yokohama Research Center 5-1 Okawa, Kanazawa-ku, Yokohama, Japan 236-8605 Tel: 045-786-5501 Fax: 045-786-5511 E-mail: biophoton@jnc-corp.co.jp

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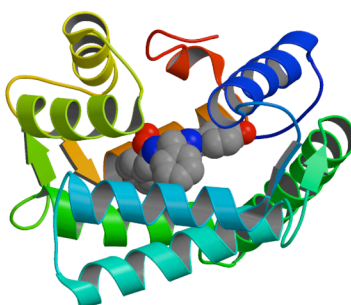
Recombinant Aequorin

Product code : AQ

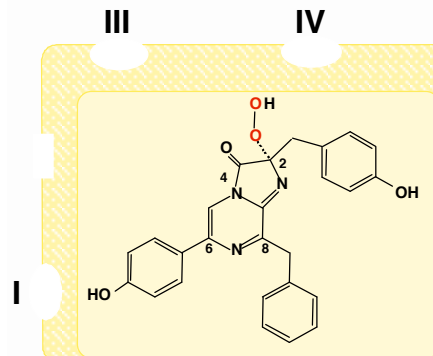
Luminescence by Ca^{2+}



Crystal structure



Structural model

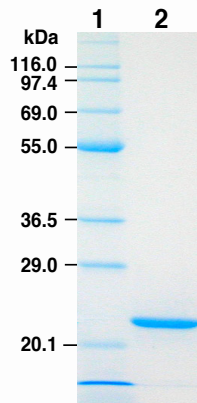


Amino acid sequence of aequorin - JNC

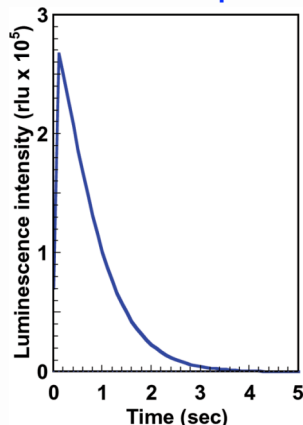
191 amino acids : Average mass 21632

EF-I	
ANSKLTSDFDNPRWIGRHKHMNFNL	DVNHNGKISLDEM VYKASDIVINNLGATPEQAKRHKDAVE [65]
EF-III	
AFFGGAGMKYGVETDWPAYIEGWKKLATDELEKYAKNEPTLIRIWGDALFDIV	DKDQNGAITLDE [130]
EF-IV	
WKAYTKAAGIIQSSCEDCEETFRVC	DIDESGQLDVMETRQHLGFWYTMDPACEKLYGGAVP [191]

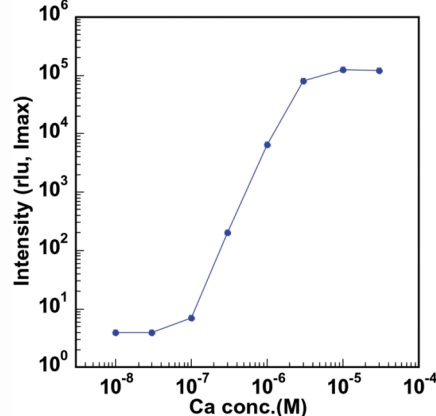
SDS-PAGE analysis



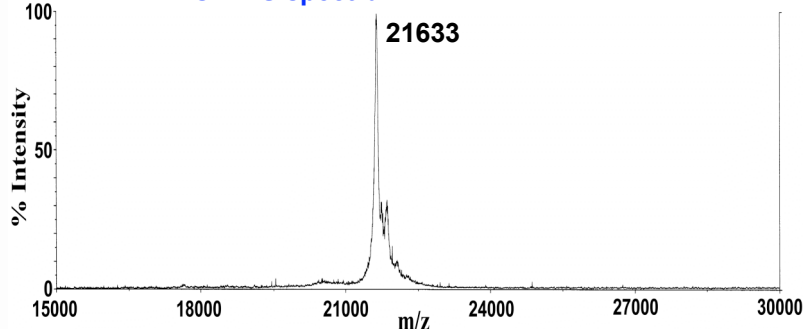
Ca^{2+} -triggered luminescence pattern



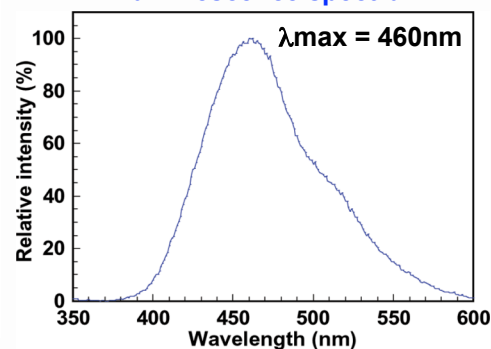
Titration curve of Ca^{2+}



MALDI-TOF-MS spectrum



Luminescence spectrum



Supplier

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