



[Chemical and Biological Engineering](#) > MITOME Noriyo



MITOME Noriyo

Organization	Chemical and Biological Engineering
Position	Associate Professor
Academic Title	Doctor(Science)
Research Fields	Biochemistry, Generic Engineering, Protein Science

<< Research Subjects >>

1. [Ion transportation of ATP synthase](#)
2. [Purification of membrane protein](#)
3. [Expression, purification, analysis of protein](#)

<< Academic Activities >>

Papers and Notes

1. [Noriyo Mitome, Sakurako Ono, Hiroki Sato, Toshiharu Suzuki, Nobuhito Sone & Masasuke Yoshida: "Essential arginine residue of the Fo-a subunit in FoF1-ATP synthase has a role to prevent the proton shortcut without c-ring rotation in the Fo proton channel.", Biochemical Journal 430 171-177. 2010](#)
2. [Hiroki Sato, Noriyo Mitome, Toshiharu Suzuki, & Masasuke Yoshida: "Aqueous access channels in subunit a of sodium transporting FoF1-ATP synthase.", Biochimica et Biophysica Acta \(BBA\) - Bioenergetics :1797 suppl. 1 p37 2010](#)
3. [Noriyo Mitome, Sakurako Ono, Toshiharu Suzuki, Nobuhito Sone & Masasuke Yoshida: "Essential Arg of subunit a in FoF1-ATP synthase plays a key role in c-ring rotation by preventing the futile proton shortcut.", Biochimica Biophysica Acta \(Bioenergetics\) 2006 Vol.14: 315 \(Meeting Abstract\)](#)
4. [Toru Hisabori, Katsuya Shimabukuro & Noriyo Mitome: "ATP synthase: highly organized molecular structure and its marvelous function PNE \(Japanese Review\), Tanpakushitsu Kakusan Koso. 2005 Aug;50\(10 Suppl\):1151-1159](#)
5. [Toshiharu Suzuki, Noriyo Mitome, Junko Suzuki, Nobuhito Sone, Mikyon Kojima & Masasuke Yoshida: "FoF1-ATPase/synthase is geared to the synthesis mode by large conformational rearrangement of C-terminal helices of epsilon subunit.", Biophysical J. 88 \(1\): 330A-330A Part 2 Suppl. S JAN 2005 \(Meeting Abstract\)](#)
6. [Noriyo Mitome, Toshiharu Suzuki, Shigehiko Hayashi & Masasuke Yoshida: "Thermophilic ATP synthase has a decamer c-ring: Indication of noninteger 10:3 H+/ATP ratio and permissive elastic coupling.", Proc. Natl. Acad. Sci. U.S.A. August 17, \(2004\) 101, 33, 12159-12164](#)
7. [Noriyo Mitome, Toshiharu Suzuki & Masasuke Yoshida: "Subunit stoichiometry of c-subunit in functional ATP synthase of thermophilic Bacillus PS3 is 10", Biophysical J. 86 \(1\): 475A-475A Part 2 Suppl. S JAN 2004 \(Meeting Abstract\)](#)
8. [Toshiharu Suzuki, Hiroshi Ueno, Noriyo Mitome, Junko Suzuki & Masasuke Yoshida: "Fo of ATP synthase is a rotary proton channel: Obligatory coupling of proton translocation with rotation of c-subunit ring.", J. Biol. Chem. \(2002\) April 12, 277: 13281-13285.](#)
9. [Noriyo Mitome, Sakurako Ono, Katsuya Shimabukuro, Eiro Muneyuki & Masasuke Yoshida: "Presence of phosphate at a catalytic site suppresses the formation of the MgADP-inhibited form of F1-ATPase", Eur. J. Biochem. \(2002\) 269, 53-60](#)
10. [Toshiharu Suzuki, Junko Suzuki, Noriyo Mitome, Hiroshi Ueno & Masasuke Yoshida: "Second Stalk of ATP synthase. Cross-linking of gamma subunit in F1 to truncated Fob subunit prevents ATP hydrolysis.", J. Biol. Chem. \(2000\) Dec 1; 275 \(48\): 37902-6](#)
11. [Tomoko Masaike, Noriyo Mitome, Hiroyuki Noji, Ryouhei Yasuda, Kazuhiko Kinoshita Jr. & Masasuke Yoshida: "Rotation of F\(1\)-ATPase and the hinge residues of the beta subunit.", J. Exp. Biol. \(2000\) Jan; 203 Pt 1: 1-8](#)

Presentations

1. [Noriyo Mitome: "Biochemical study of ATP synthase using fusion protein technique", The Institution of Professional Engineers, Japan and The Korean Professional Engineers Association Symposium 17th October 2010 Kaikyo Messe](#)

- [Shimonoseki, invited speaker](#)
2. [Noriyo Mitome: "Young Engineers Committee Activity of the Institute of Professional Engineer in Japan", The Institution of Professional Engineers, Japan and The Hong Kong Institution of Engineers International Meeting 13th March 2010 Headquarter of IPEJ Bunkyo-Ku, Invited speaker](#)
 3. [Noriyo Mitome: "Essential Arg of a subunit in FoF1-ATP synthase plays a key role in c-ring rotation.", Division of Biophysics, Faculty of Biology/Chemistry, University of osnabrück, German, 2 May 2006 invited speaker](#)
 4. [Noriyo Mitome, Sakurako Ono, Toshiharu Suzuki, Nobuhito Sone & Masasuke Yoshida: "Essential Arg of a subunit in FoF1-ATP synthase plays a key role in c-ring rotation.", Gordon Research Conference \(Proton & Membrane Reaction\) Ventura, CA, 2006 Feb.26th -Mar.-3rd: Selected as a Speaker](#)
 5. [Noriyo Mitome, Sakurako Ono, Toshiharu Suzuki, Nobuhito Sone & Masasuke Yoshida: "Essential Arg of a subunit in FoF1-ATP synthase plays a key role in c-ring rotation.", 15th International Union for Pure and Applied Biophysics, 5th European Biophysics Societies' Association International Biophysics Congress, Montpellier, France 2005 Aug 27th-Sep 1st; Selected as a Speaker](#)
 6. [Noriyo Mitome: "Essential Arg of a subunit in FoF1-ATP synthase plays a key role in c-ring rotation.", Dunn Human Nutrition Unit, Medical Research Council, UK, 4 September 2005 Invited Speaker](#)
 7. [Noriyo Mitome, Toshiharu Suzuki & Masasuke Yoshida: "Thermophilic ATP synthase has a decamer c-ring", Gordon Research Conference \(Molecular and Cellular Bioenergetics\) Andover Proctor Academy, NH, 2004 June 20th-25th; Selected as a Speaker](#)