

Product number: K35

Product name: K35

General Data

Molecular Mass: 360.36

Solubility: Chloroform, Toluene, Alcohol, DMF, DMSO

Insoluble: Water

Storage: Store in absence of light, desiccate and refrigerate

Description

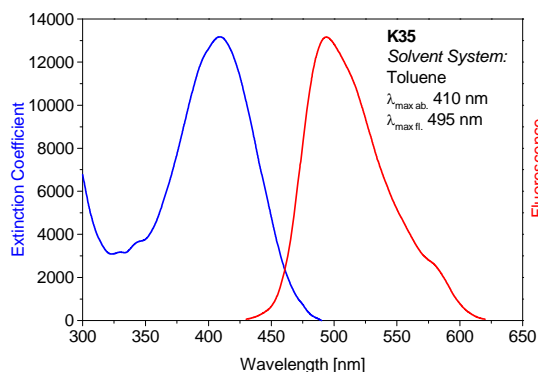
- K35** is a hydrophobic fluorescent probe for albumin binding sites in plasma and serum^[1-3]. Albumin binding site and binding constants of **K35** correlate with several human disorders and diseases including coronary heart disease and myocardial infarction^[4], liver disorders including hepatitis^[5], critical states in surgery practice^[6,7], and schizophrenia^[8]. More details can be found in publications^[9-16].

Advantages

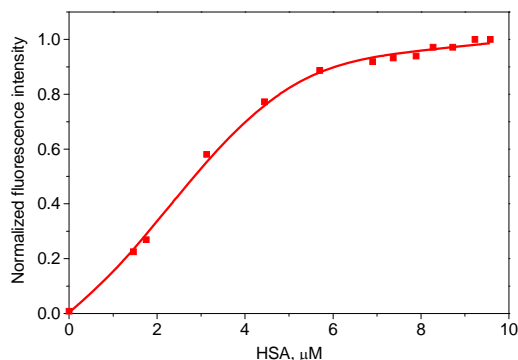
- Perfectly suited for excitation with the 380-nm and 405-nm diode lasers
- Very low quantum yield in aqueous media but it is highly increased after non-covalent association with serum albumin
- pH-insensitive between pH 3 and pH 10
- Low molecular weight

Spectral Data

Media	Absorption max. [nm]	Extinction Coefficient [$M^{-1}\cdot cm^{-1}$]	Fluorescence max. [nm]	Quantum Yield [%]
Ethanol	430	13,200	552	0.5
Toluene	410	10,000	495	60



Absorption and emission spectrum of **K35** in toluene



Changes in fluorescence emission of **K35** upon titration with **HSA**. The concentration of **K35** was 11.5 μM .

References

- Serum Albumin in Clinical Medicine. Book 2 (Editors: Gryzunov Yu.A. and Dobretsov G.E.), Moscow, Geotar, 1998 (in Russ.).
- Miller Y.I., Gryznov Y.A., Dobretsov G.E., Aidyaliev R.K., Krasovitski B.M., Kormilova L.I., Ermolenko I.G. K-35, a new fluorescent probe for albumin binding sites in plasma and serum, Toxicol. Lett., 1995, Suppl. 1/78, 57.
- USSR Pat. 1681266 (1989).
- Gryzunov Yu.A., Pestova A.B., Kozaimany E.N. et al. Clin. Lab. Diagnostics (in Russ.), 1994, No.5, 23–25.

Product number: K35

Product name: K35

- ⁵ Andreeva O.L., Shmeleva L.T., Dobretsov G.E. Changes in the albumin transport function and their control by use of a fluorescent method in hepatitis and hepatic cirrhosis. *Efferent. Therapy (Sanct-Peterburg)*, 1995, No.3, 35–39 (in Russ.).
- ⁶ Gryzunov Yu.A., Dobretsov G.E., Zaks I.O., Komarova M.N. Blood albumin: properties, functions and their estimation at critical states (a review). In *Reanimatology and Intensive Therapy*. Moscow: VINITI, 1997, No.3, 3–13 (in Russ.).
- ⁷ Ivleva V.V., Zaks I.O., Mescheriakov G.N., et al. Lung metabolic function in critical states of patients. 1st Russian Congress on athophysiology. Moscow, 1996, 297 (in Russ.).
- ⁸ Gryzunov Yu.A., Misionznik E.Yu., Uzbekov M.G., Molodetskich A.V. Influence of haloperidol treatment on the time course of serum albumin binding capacity in schizophrenia patients. *Toxicol. Lett.*, 1995, Suppl.1/78, 38.
- ⁹ Dobretsov G.E., Kurek N.K., Syrejschikova T.I., Yakimenko M.N., Clarke D.T., Jones G.R., Munro I.H. Time-resolved spectroscopy of the probe fluorescence in the study of human blood protein dynamic structure on SR beam. *Nuclear Instruments and Methods in Physics Research Section, A*, 2000, 448(1-2):471–477.
- ¹⁰ Gryzunov Yu.A., Syrejschikova T.I., Komarova M.N., Misionzhnik E.Yu., Uzbekov M.G., Molodetskich A.V., Dobretsov G.E., Yakimenko M.N. Serum albumin binding sites properties in donors and in schizophrenia patients: the study of fluorescence decay of the probe K-35 using S-60 synchrotron pulse excitation, *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*. 2000, 448(1–2):478-482.
- ¹¹ Gryzunov Yu.A., Deev A.I., Kuryшева N. I., Komarova M.N. Fluorescent method for albumin assay in human aqueous humour and tear fluid, *Bull. Experimental Biology and Medicine*, 1999, 128(5):1179–1181.
- ¹² Miller Y.I., Dobretsov G.E. Molecular bases of the fluorescence method in the determination of binding capacity of serum albumin, *Klin. Lab. Diagn.*, 1994, 5, 20–23.
- ¹³ Afanas'eva A.N., Dem'ianov S.V., Repin A.N., Afanas'ev S.A., Markov V.A. Changes in the binding properties of albumin in patients with myocardial infarction, *Klin. Med. (Moscow)*. 2006, 84(11):36–39.
- ¹⁴ Afanas'eva A.N., Evtushenko V.A. Clinical significance of albumin parameters in oncology patients. *Anesteziol Reanimatol.*, 2004 (6):64–68.
- ¹⁵ Titov V.N., Staroverov I.I., Ameliushkina V.A., Gryzunov Yu.A., Filipenko M.B., Tvorogova M.G., Dobretsov G.E., Diagnostic significance of albumin transporting characteristics and blood level of troponin T in myocardial infarction. *Klin. Lab. Diagn.*, 2002 (1):3-7.
- ¹⁶ Kuryшева N.I., Deev A.I., Gryzunov Yu.A., Komarova M.N. Method for assessing involution ophthalmotoxocosis by fluorescent analysis of lacrimal fluid. *Vestn Oftalmol.*, 2000, 116(3):16–18.