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## Product Data Sheet

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Product Name: Fetuin, Fetal Bovine Serum

Cat. No.: GC60166

### Chemical Properties

Cas. No. 9014-81-7

Formula

M.Wt

Solubility H<sub>2</sub>O : 50 mg/mL (Need ultrasonic)

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Protocol

#### Animal experiment

##### [1]:

Animal models Male nude mice

Preparation Method The prostate adenocarcinoma cell PC-3 (2 million cells) were injected on the upper half of the dorsal thorax of the mice. The tumors were allowed to grow for 6 weeks. The mice in the control group (no treatment) received 0.1 ml saline intraperitoneally for 5 days and the mice in the treated group received 50 mg/kg Fetuin, Fetal Bovine Serum. Treatment started the day after tumor inoculation for 5 days. Six weeks after the inoculation of tumor, mice were killed and tumors were removed and weighed.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Dosage form	Intraperitoneal injection, 50 mg/kg/d for 5d
Applications	Tumors (average weight 325 mg) developed in 13 of 13 mice in the control group (treated with saline), none of the nine mice treated with fetuin (50 mg/kg) developed any tumor.

### References:

[1]: Yu C L, Tsai M H.  
Fetal fetuin selectively  
induces apoptosis in  
cancer cell lines and  
shows anti-cancer  
activity in tumor  
animal models[[]].  
Cancer letters, 2001,  
166(2): 173-184.

### Background

Fetuin, Fetal Bovine Serum is a glycoprotein from fetal bovine serum, which is often an important supplement to many serum-free media. Bovine fetuin preparation has inhibited trypsin activity and promote cellular attachment, growth, and differentiation in many different culture systems [1]. Fetuins are established as a family within the cystatin superfamily [2].

Fetuin, Fetal Bovine Serum had activity on the S3 strain of HeLa cells for promoting cell attachment and stretching (flattening) on the glass [3]. Fetuin, Fetal Bovine Serum preparations stimulated the growth of a variety of mammalian cells from different species. Fetuin, Fetal Bovine Serum (30- 960 µg/ml) stimulated the growth of Hela cell [4]. The nuclei of the LNCaP cells that had been incubated with the Fetuin, Fetal Bovine Serum showed the characteristics of apoptosis [5].

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Fetuin, Fetal Bovine Serum enhanced survival rate by up to 141% in the P388 leukemia model. In the PC-3 prostate cancer animal model, fetuin (50 mg/kg) seems to completely inhibit the formation of prostate cancer in mice [5].

### References:

- [1]. Nie Z. Fetuin: its enigmatic property of growth promotion[J]. American Journal of Physiology-Cell Physiology, 1992, 263(3): C551-C562.
- [2]. Brown W M, Dziegielewska K M, Saunders N R, et al. Fetuin-an old friend revisited[J]. Bioessays, 1992, 14(11): 749-755.
- [3]. Fisher H W, Puck T T, Sato G. Molecular growth requirements of single mammalian cells: The action of fetuin in promoting cell attachment to glass[J]. Proceedings of the National Academy of Sciences, 1958, 44(1): 4-10.
- [4]. Marr A G M, Owen J A, Wilson G S. Studies on the growth-promoting glycoprotein fraction of foetal calf serum[J]. Biochimica et Biophysica Acta, 1962, 63(2): 276-285.
- [5]. Yu C L, Tsai M H. Fetal fetuin selectively induces apoptosis in cancer cell lines and shows anti-cancer activity in tumor animal models[J]. Cancer letters, 2001, 166(2): 173-184.

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