



Product Information Sheet

Mouse GALECTIN-1 ELISA Kit

Catalog No.	EK0763
Size	96T
Range	156pg/ml-10000pg/ml
Sensitivity	< 5pg/ml

Specificity

No detectable cross-reactivity with any other cytokine.

Storage

Store at 4°C for frequent use, at -20°C for infrequent use.

Avoid multiple freeze-thaw cycles (Shipped with wet ice.)

Expiration

Four months at 4°C and eight months at -20°C.

Application

For quantitative detection of mouse GALECTIN-1 in sera, plasma, body fluids, tissue lysates or cell culture supernates.

Principle

Mouse GALECTIN-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Mouse GALECTIN-1 specific-specific polyclonal antibodies were precoated onto 96-well plates. The mouse specific detection polyclonal antibodies were biotinylated. The test samples and biotinylated detection antibodies were added to the wells subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse GALECTIN-1 amount of sample captured in plate.

Kit Components

1. Lyophilized recombinant mouse GALECTIN-1 standard: 10ng/tubex2.
2. One 96-well plate precoated with anti- mouse GALECTIN-1 antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- mouse GALECTIN-1 antibody : 130µl, dilution 1:100.
5. Antibody diluent buffer: 12ml.
6. Avidin-Biotin-Peroxidase Complex (ABC) : 130µl, dilution 1:100.
7. ABC diluent buffer: 12ml.
8. TMB color developing agent: 10ml.
9. TMB stop solution: 10ml.

Material Required But Not Provided

1. Microplate reader in standard size.
2. Automated plate washer.
3. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection.
4. Clean tubes and Eppendorf tubes.
5. Washing buffer (neutral PBS or TBS).

Preparation of 0.01M **TBS**: Add 1.2g Tris, 8.5g NaCl; 450µl of purified acetic acid or 700µl of concentrated hydrochloric acid to 1000ml H₂O and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

Preparation of 0.01 M **PBS**: Add 8.5g sodium chloride, 1.4g Na₂HPO₄ and 0.2g NaH₂PO₄ to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total

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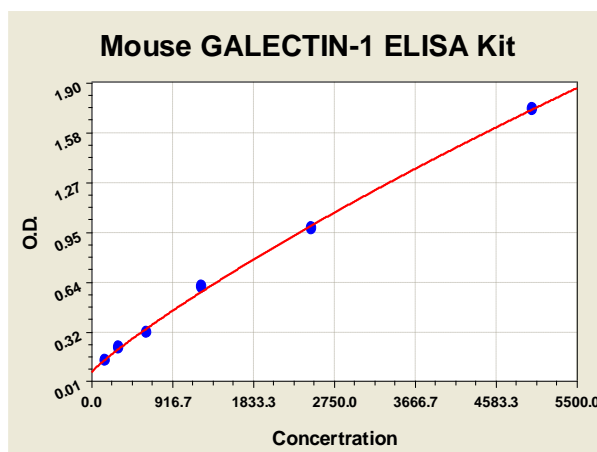
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volume to 1L.

Notice for Application of Kit

1. Before using Kit, spin tubes and bring down all components to bottom of tube.
2. Duplicate well assay was recommended for both standard and sample testing.
3. Don't let 96-well plate dry, dry plate will inactivate active components on plate.
4. In order to avoid marginal effect of plate incubation due to temperature difference (reaction may be stronger in the marginal wells), it is suggested that the diluted ABC and TMB solution will be pre-warmed in 37°C for 30 min before using.

Mouse GALECTIN-1 ELISA Kit-1X96 Well Plate Image



Background

Galectin-1 is a protein that in humans is encoded by the *LGALS1* gene.^{[1][2]} The galectins are a family of beta-galactoside-binding proteins implicated in modulating cell-cell and cell-matrix interactions. *LGALS1* may act as an autocrine negative growth factor that regulates cell proliferation.^[3] Baldini et al. stated that the mouse beta-galactoside-binding protein is an autocrine regulator of cell proliferation with a role in the maintenance of G0 and in the control of G2 traverse.^[4] They found that galectin-1 was expressed in a subset of slowly dividing subventricular zone astrocytes, which included the neural stem cells. Intraventricular infusion experiments and phenotypic analysis of knockout mice showed that galectin-1 was an endogenous factor that promoted the proliferation of neural stem cells in adult mouse brain. The standard product used in this kit is recombinant mouse GALECTIN-1, Ala2-Glu135, with the molecular mass of 15KDa.

Reference

1. ¹ Gitt MA, Barondes SH (Feb 1991). "Genomic sequence and organization of two members of a human lectin gene family". *Biochemistry* **30** (1): 82–9.
2. ² Gauthier L, Rossi B, Roux F, Termine E, Schiff C (Oct 2002). "Galectin-1 is a stromal cell ligand of the pre-B cell receptor (BCR) implicated in synapse formation between pre-B and stromal cells and in pre-BCR triggering". *Proc Natl Acad Sci U S A* **99** (20): 13014–9.
3. Baldini, A., Gress, T., Patel, K., Muresu, R., Chiariotti, L., Williamson, P., Boyd, Y., Casciano, I., Wells, V., Bruni, C. B., Mallucci, L., Siniscalco, M. Mapping on human and mouse chromosomes of the gene for the beta-galactoside-binding protein, an autocrine-negative growth factor. *Genomics* 15: 216-218, 1993.

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