

Human Galectin 3 protein, His tag (active)

Cat. No. GTX00195-pro

Application	Functional Assay
Species	Human

Package
10 µg

APPLICATION

Application Note

Galectin 3 (GAL3) is a member of the lectin family, of which 14 mammalian galectins have been identified. It is also a member of the beta-galactoside-binding protein family that plays an important role in cell-cell adhesion, cell-matrix interactions, macrophage activation, angiogenesis, metastasis, apoptosis. The protein also has been demonstrated to be involved in cancer, inflammation and fibrosis, heart disease, and stroke. GAL3 is expressed in the nucleus, cytoplasm, mitochondrion, cell surface, and extracellular space. Besides, Alpha-2-Heremans Schmid Glycoprotein (aHSG) has been identified as an interactor of GAL3, thus a binding ELISA assay was conducted to detect the interaction of recombinant human GAL3 and recombinant human aHSG. Briefly, GAL3 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to aHSG-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-GAL3 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of GAL3 and aHSG was in a dose dependent manner.

GAL3 also can agglutinate red blood. In this case, we chose rabbit erythrocyte (RaE) to assay its ability of agglutination. A general procedure for hemagglutination assay (or haemagglutination assay; HA) is as follows, two-fold dilute the recombinant human GAL3 with 0.01M PBS (pH 7.4), add 50 µl a serial dilution of GAL3 to each well of a U or V- bottom shaped 96-well microtiter plate. The final well serves as a negative control with no GAL3, replace with 50 µl 0.01M PBS. Then add 50 µl 1% rabbit erythrocyte to each well and mixed gently. The plate is incubated for 1-2 hours at room temperature. The minimal effective concentration of GAL3 is 1.2 µg/ml.

Observed MW 28 kDa.

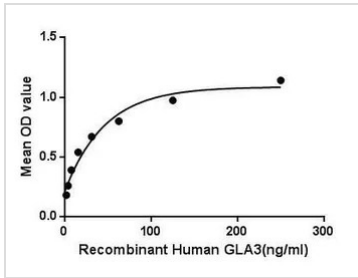
PROPERTIES

Form	Lyophilized powder
Buffer	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.
Preservative	ProClin 300
Storage	For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.
Region/Sequence	Full length protein, N-terminal His-Tag; Met1~Ile250 (NP_002297.2)
Expression System	E. coli
Purity	> 97%
Endotoxin	< 1 EU/µg
Conjugation	Unconjugated
Note	For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

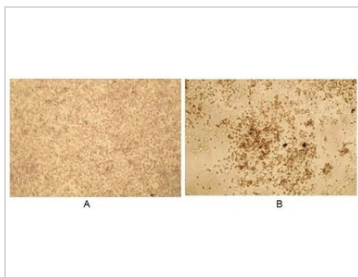


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DATA IMAGES

GTX00195-pro Functional Assay Image

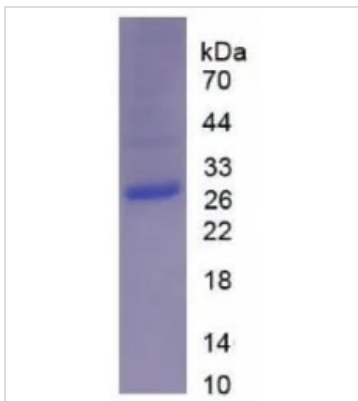
Functional ELISA analysis of GTX00195-pro Human Galectin 3 protein (active) which can bind immobilized aHSG protein.


GTX00195-pro Functional Assay Image

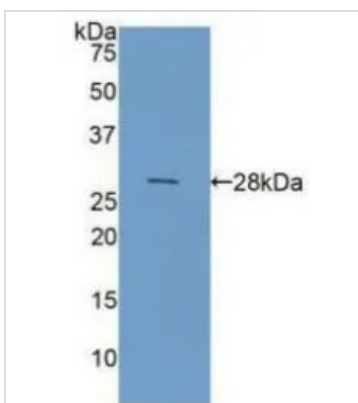
The hemagglutination effect of GTX00195-pro Human Galectin 3 protein (active).

(A) 1% rabbit erythrocyte without GAL3.

(B) 1% rabbit erythrocyte treated with 1.2 µg/ml GAL3 for 2hrs at room temperature.


GTX00195-pro Image

SDS-PAGE analysis of GTX00195-pro Human Galectin 3 protein (active).


GTX00195-pro Image

WB analysis of GTX00195-pro Human Galectin 3 protein (active).



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