

Datasheet for 100-4136**Beta Galactosidase Antibody****Overview**

Description:	Anti-Beta Galactosidase (E. coli) (RABBIT) Antibody - 100-4136
Item No.:	100-4136
Size:	2 mL
Applications:	WB, IF, IHC, Multiplex
Reactivity:	b-GAL
Host Species:	Rabbit

Product Details

Background:	Anti Beta Galactosidase Antibody recognizes the enzyme beta galactosidase, or β -galactosidase, that is a component of assays used frequently in genetics, molecular biology (see X-gal) for a blue white screen, and other life sciences. IPTG induces production of β -galactosidase by binding and inhibiting the lac repressor. Since it is highly expressed and accumulated in lysosomes in senescent cells, it is used as a senescence biomarker both in vivo and in vitro in qualitative and quantitative assays, despite its limitations. Anti-beta Galactosidase Antibody is ideal for investigators involved in enzyme research.
Synonyms:	rabbit anti-BETA GALACTOSIDASE Antibody, beta-galactosidase, rabbit anti-beta-gal antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	LacZ
Reactivity:	b-GAL
Immunogen Type:	Native Protein
Immunogen:	Beta Galactosidase (E.coli)

Purity/Specificity: Beta-Galactosidase Antibody was prepared from monospecific antiserum by a delipidation and defibrination. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-rabbit serum, purified and partially purified Beta Galactosidase [E. coli]. Cross reactivity against Beta Galactosidase from other sources may occur but have not been specifically determined.

Relevant Links:

- [UniProtKB - P00722](#)
- [NCBI - NP_414878.1](#)

Application Details

Tested Applications:	WB
Suggested Applications:	IF, IHC, Multiplex (Based on references)
Application Note:	Anti-Beta-Gal Antibody has been tested by western blot and is suitable for immunoblotting (western or dot blot), ELISA, immunoprecipitation and most immunological methods requiring high titer and specificity.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:65,000
IHC:	1:500
WB:	1:500 - 1:2,000

Formulation

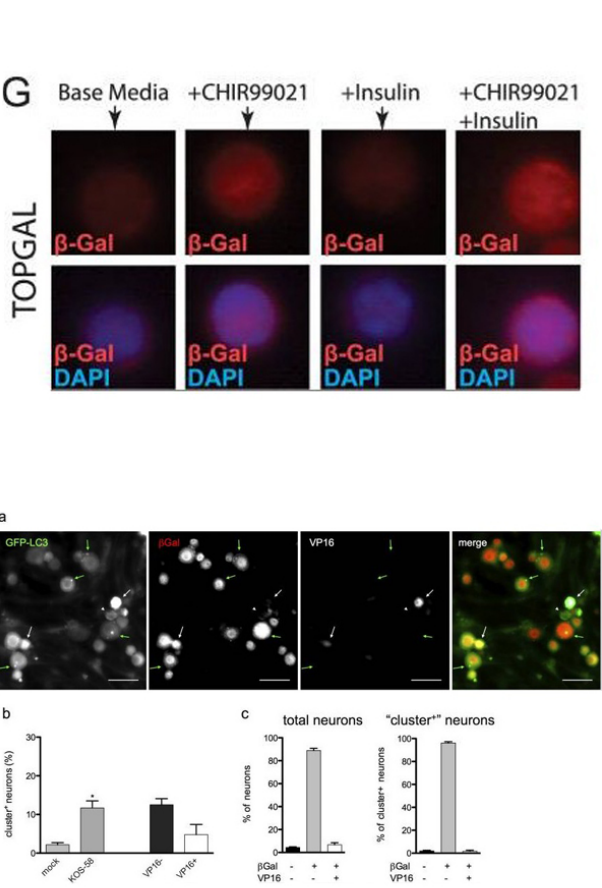
Physical State:	Lyophilized
Concentration:	85 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	2.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
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Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

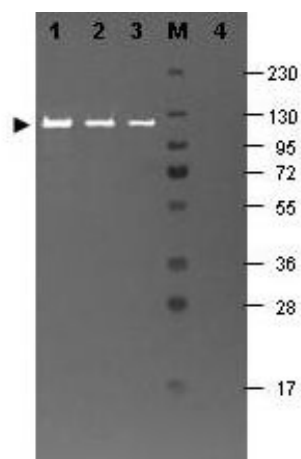


Immunofluorescence Microscopy

(G) MNCs isolated from TOPGAL mice were cultured for 7 d in base medium and base medium + CHIR99021 and/or insulin as indicated. LSK Flk2- cells were sorted from these cultures and stained for β-galactosidase (β-Gal). Cells were sorted onto lysine-coated slides, fixed with methanol, and stained using 1:50 dilution, anti-β-galactosidase (p/n 100-4136). Fig 6. PMID: 21890648.

Immunofluorescence Microscopy

Large GFP-LC3+ structures (clusters) form in neurons that harbor the HSV-1 genome. (a) GFP-LC3 neurons infected with KOS-58 and stained for β-Gal (red) and VP16 (white). Green arrows indicate neurons with clusters, β-Gal expression, and no VP16. White arrows indicate neurons with VP16 expression and no clusters. Bar = 50 μm. (b) Quantification of cultures described for panel a and analyzed as for Fig. 1d. (c) Quantification of β-Gal and VP16 prevalence among total neurons (left graph) or among cluster-positive neurons (right graph) in the cultures represented in panel a. A total of ≥3 experiments were performed, with >1,000 neurons scored per experiment. Error bars represent SEMs. Significance was evaluated by one-way analysis of variance (ANOVA) with Bonferroni posttests. *, P < 0.05. Fig 2. PMID: 26912623.



Western Blot

Western blotting using Rockland's Fluorescein conjugated anti-b-Galactosidase antibody shows a band at ~117 kDa (lanes 1 - 3) corresponding to 60 ng, 30 ng and 15 ng, respectively of b-Gal present in partially purified preparations (arrowhead). Lane 4 shows no cross reactivity with proteins present in a non-specific control E.coli lysate. Proteins were resolved on a 4-20% Tris-Glycine gel by SDS-PAGE and transferred to nitrocellulose and blocking using Blocking Buffer for Fluorescent Western Blotting (p/n MB-070). The membrane was probed with fluorescein conjugated anti-b-Galactosidase (p/n 200-4236) diluted to 1:10,000. Reaction occurred for 2 hours at room temperature. Molecular weight estimation was made by comparison to a prestained MW marker in lane M. Fluorescence image was captured using the VersaDoc® Imaging System developed by BIO-RAD. Other detection systems will yield similar results.

References

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- Cabrera et al. Neuronal subtype determines HSV-1 Latency-Associated-Transcript (LAT) promoter activity during latency. *Journal of Virology* (2018)
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- Katzenell et al. Herpes Simplex Virus and Interferon Signaling Induce Novel Autophagic Clusters in Sensory Neurons. *Journal of Virology* (2016)
- Perry JM et al. Cooperation between both Wnt/ β -catenin and PTEN/PI3K/Akt signaling promotes primitive hematopoietic stem cell self-renewal and expansion. *Genes Dev*. (2011)
- Dufresne-Martin G et al. Peptide mass fingerprinting by matrix-assisted laser desorption ionization mass spectrometry of proteins detected by immunostaining on nitrocellulose. *Proteomics*. (2005)
- Economides KD et al. Hoxb13 is required for normal differentiation and secretory function of the ventral prostate. *Development*. (2003)

Disclaimer

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