

Product datasheet for **R1064PS**

lacZ Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, IF, IHC, IP, WB
Recommended Dilution:	Suitable for Immunoblotting (Western or dot blot), ELISA, Immunofluorescence microscopy, Immunoprecipitation, conjugation and most immunological methods requiring high titer and specificity. Western blot: 1/5,000-1/10,000. A 1/5,000 dilution has been reported to be successful for staining by Immunoblot of Beta-galactosidase fusion proteins after transfer using a semi-dry transfer apparatus). ELISA: 1/10,000. Immunohistochemistry: 1/1,500. The antibody recognizes both Frozen tissue sections, Paraffin embedded tissue and 4% paraformaldehyde fixed tissue for most immunohistochemical analysis: A 1/1,500 dilution has been reported to detect Beta-galactosidase in adult rat spinal cord tissue after infection with helper-dependent adenovirus expressing lacZ. In this particular experiment, tissue was perfused with 4% paraformaldehyde and cryostat-cut (35 µm) to produce free-floating sections. A 1/5,000 dilution has been reported for immunofluorescent staining of methanol fixed, devitellinized Drosophila embryos. Although a wide range of conditions was reported to be effective, a 1/10,000 dilution was noted to show no background and to be suitable for double labeling experiments). A 1/5,000 dilution has been reported to be successful for staining brain sections from transgenic mice expressing nuclear Beta-galactosidase when assayed by Immunofluorescence microscopy .
Reactivity:	Escherichia coli
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Full length native Beta-galactosidase isolated from <i>E.coli</i>
Specificity:	This antibody detects Beta-galactosidase [<i>E. coli</i>]. Cross reactivity against Beta-galactosidase from other tissues and species may occur but have not been specifically determined. Very low background staining has been reported in various assays. Immunoelectrophoresis gives a single precipitin arc against anti-rabbit serum as well as purified and partially purified Beta-galactosidase [<i>E.coli</i>].



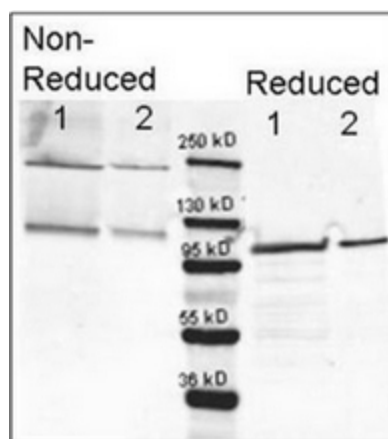
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Formulation:	0.02M Potassium phosphate, 0.15M Sodium chloride, pH 7.2 State: Purified State: Lyophilized purified IgG fraction Stabilizer: None Preservative: 0.01% (w/v) Sodium azide
Reconstitution Method:	Restore with 0.1 ml of deionized water (or equivalent).
Concentration:	lot specific
Purification:	Multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer
Conjugation:	Unconjugated
Storage:	Store lyophilized at 2-8°C for 6 months or at -20°C long term. After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term. Dilute only prior to immediate use. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Database Link:	P00722
Background:	Beta-galactosidase is coded by a gene (lac z) in the lac operon of Escherichia coli. It is a metalloenzyme that splits lactose into glucose and galactose. It hydrolyzes terminal, non-reducing beta-D-galactose residues in beta-D-galactosides. Activation by cations seems to be substrate dependent. K ⁺ , Na ⁺ , NH ₄ ⁺ , Rb ⁺ , Cs ⁺ and Mn ⁺⁺ all activate enzyme activity based upon the substrate used. 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:	Beta-Gal tag, lacZ tag, b0344, JW0335, Beta-Gal Fusion Protein, Lactase
Note:	Conjugates available. Please ask for details.

Product images:



Western blot using Beta-galactosidase antibody. shows detection of a band at ~117 kDa (lane 1) corresponding to the protein present in partially purified preparations. Approximately 50 ng of protein was separated on a 4-20% Tris-Glycine gel by SDS-PAGE and transferred onto nitrocellulose. After blocking the membrane was probed with the primary antibody diluted to 1/1,000. Reaction occurred overnight at 4°C followed by washes and reaction with a 1/10,000 dilution of IRDye800 (TM) conjugated goat-a-rabbit IgG [H&L] for 45 min at RT (800 nm channel, green). Molecular weight estimation was made by comparison to prestained MW markers in lane M (700 nm channel, red). RDye800 (TM) fluorescence image was captured using the Odyssey (R) infrared imaging system developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.



Western blotting using Beta-galactosidase antibody. Lane 1 shows 80 ng and lane 2 shows 20 ng loaded onto gel. Results for Non-Reducing Conditions of SDS-PAGE prior to transfer to nitrocellulose are shown on the left side of the figure; results obtained under Reducing Conditions are shown on the right. Blots were blocked overnight at 4°C with blocking buffer for fluorescent Western blotting (p/n MB-070). The membrane was probed with Beta-galactosidase antibody [R1064P] diluted to 1/10,000. Reaction occurred overnight at 4°C. Dylight649™ conjugated goat-anti-rabbit IgG was used for detection. Molecular weight estimation was made by comparison to a prestained MW marker (center). Fluorescence image was captured using the VersaDoc® imaging system developed by BIO-RAD. Other detection systems will yield similar results.