FT-LO3480

# β-glucuronidase

The Glucuronidase is used for the hydrolysis of glucuronide conjugates in urinary metabolite analysis. Beta-Glucuronidase from *Helix Pomatia* is more effective than the other glucuronidases in hydrolyzing steroid glucuronides.

## Products Description

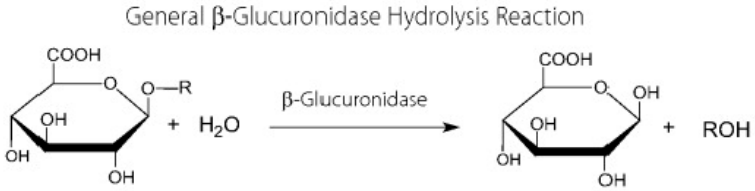
| | | | | |
|---|---|---|---|---|
| Catalog : | LO3480, 1ml | LO3481, 2ml | LO3483, 5ml | LO3484, 10ml |
| Name: | **β-Glucuronidase solution, from *Helix Pomatia*** | | | |
| | type HP-2 | | | |
| Concentration: | >100 000 units*/ml aqueous solution | | | |
| | Also available as 85 000 units/ml solution #LO348A | | | |
| Storage: | 0-4°C (K) - long term: stable 2 years at -20°C | | | |

Catalog : Inquire #AJQ52
Name: **β-Glucuronidase powder, from *Helix Pomatia***
Syn.: β-D-Glucuronide glucuronosohydrolase; GUS . CAS: 9001-45-0 . EC 3.2.1.31

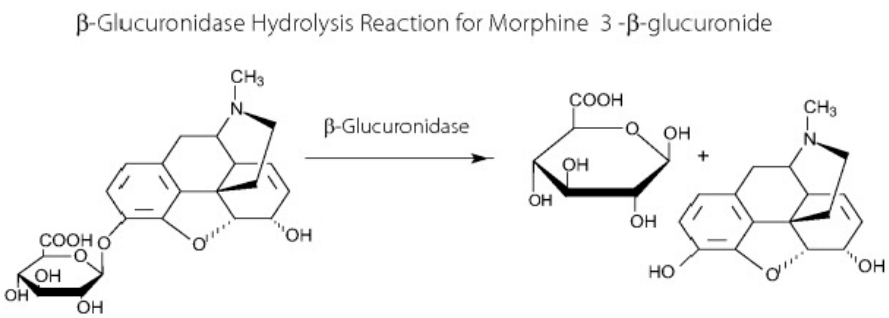
* One unit or modified Fishman unit liberates 1.0 µg phenolphthalein from phenolphthalein glucuronide per hour at 37 $^0$C at pH 5.0.

## Introduction

β-Glucuronidase (ß-D-Glucuronide glucuronosohydrolase, EC 3.2.1.31, CAS: 9001-45-0) is routinely used for the enzymatic hydrolysis of glucuronides from urine, plasma, and other fluids prior to analysis by enzyme immunoassay, mass spectrometry, gas chromatography, high performance liquid chromatography, or other means. Its solution is a stable reagent for cleaving the glucuronide from drug metabolites, i.g. in toxicology studies.
The glucuronidase catalyzes the reaction:




This glucuronidase from *Helix Pomatia* is reported to be more effective for urine, and in hydrolyzing steroid glucuronides, than opiod ones.




Our beta-Glucuronidase solution is highly active, and is lower in viscosity, allowing it to be easily compatible with autosampler delivery.

Typically, between 1 and 20 units of glucuronidase is used per µl of plasma, urine, or bile for the enzymatic hydrolysis of glucuronides present in these samples. The exact amount needed will depend on the specific conditions used and must be determined empirically.

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## Preparation of Solution:

Prepare ß-Glucuronidase, 5 000 Fishman units/mL solution:
Dissolve 1ml of ß-Glucuronidase solution containing 100 000 Fishman units with 20 mL 100 mM acetate buffer (pH 5.0). Store at 2+4°C in plastic vial. Stable several days, but prepare daily for best results.

## Preparation of for Enzymatic Hydrolysis of Beta Glucuronides:

To 2 mL of urine add internal standard(s) and 1 mL of ß-glucuronidase solution (prepared above to contains: 5 000 Fishman units/mL)

Mix/vortex.

Hydrolyse for 3 hours at 37°C.

## Safety

GSH08 (Danger)
Hazard statements: H317-H334
Precautionary statements: P261-P280-P342 + P311
Not regulated for all modes of transport.

## Related products

β-Glucuronidase, from *abalone* (#AYPMO1, powder; #LO3470, solution) FT-LO3470
beta Glucuronidase from abalone is a sustainable great choice for hydrolyzing opiod-glucuronides. (#BFWU0/with 4-ArylSufatase)

β-Glucuronidase, from *E.coli* (#653395, solution) (#LO5330)
beta Glucuronidase from E.coli enables rapid hydrolysis of steroids (Carboxy-THC-glucuronide; Buprenorphrine and Norbuprenorphrine glucuronides; Codiene-6-glucuronide); No conversion of 6-MAM to morphine). No sulfatase contaminants.

β-Glucuronidase, from *Patella vulgata* (AYPMS0, solution)
beta Glucuronidase from limpets- patella vulgata is more effective and superior for hydrolyzing opiod glucuronides, Buprenorphrine ( suboxone ) and Norbuprenorphrine

beta-Glucuronidase from *Homo sapiens* (#24725_, powder)

*Inhibitors:[r]
D-glucuronic acid (Ki = 1.5 mM)
D-galacturonic acid (Ki = 4.3 mM)
D-glucaro-1,4-lactone (Ki = 170 nM)

*Substrates:
5-Bromo-6-chloro-3-indolyl β-D-glucuronide (B 4532)
6-Bromo-2-naphthyl β-D-glucuronide (B 6519)
5-Bromo-4-chloro-3-indolyl β-D-glucuronide sodium salt tablet (B 8174)
8-Hydroxyquinoline glucuronide (H 1254)
4-Methylumbelliferyl β-D-glucuronide (M 5664)
4-Nitrophenyl β-D-glucopyranoside (N 7006)

* Literature :
Wakabayashi, M. and Fishman, W.H. ; J. Biol. Chem. 236 (1961) 996-1001.
The comparative ability of beta-glucuronidase preparations (liver, Escherichia coli, Helix pomatia, and Patella vulgata) to hydrolyze certain steroid glucosiduronic acids.

## Other Information

For in vitro R&D use only

Please contact InterBioTech – Interchim for any other information