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DATA SHEET

# Mouse Anti-Glucuronidase β [MD432]: MC0687, MC0687RTU7

**Intended Use:** For Research Use Only

**Description:** Glucuronidases β are members of the glycosidase family of enzymes that catalyze breakdown of complex carbohydrates. Human β-glucuronidase is a type of glucuronidase that catalyzes hydrolysis of β-D-glucuronic acid residues from the non-reducing end of mucopolysaccharides as heparan sulfate. Beta-glucuronidase plays a crucial role in glucuronide hydrolysis, supporting detoxification and excretion of endogenous and exogenous compounds. Glucuronidases β deficiencies cause mucopolysaccharidosis type VII, a lysosomal storage disorder marked by glycosaminoglycan buildup, resulting in severe physiological effects. Beta-glucuronidase forms a homotetramer, with each subunit containing a jelly roll barrel, an immunoglobulin constant domain, and a TIM barrel essential for catalytic function. Glu 451 and Glu 540 residues are critical for enzymatic activity, and mutations at these sites can disrupt structure and function. Beta-glucuronidase regulation influences tumorigenesis and cancer invasiveness, making beta-glucuronidase a potential therapeutic target.

**Specifications:**

| | |
|---|---|
| Clone: | MD432 |
| Source: | Mouse |
| Isotype: | IgG1k |
| Immunogen: | Human β-glucuronidase C-terminus aa 352-651 |
| Reactivity: | Human |
| Localization: | Cytoplasm |
| Formulation: | Purified antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3) |
| Storage: | Store at 2°- 8°C |
| Applications: | IHC, ELISA, IF, IP, WB |

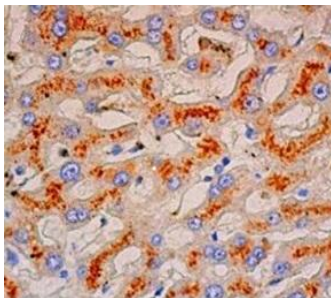
Package:

| Description | Catalog No. | Size |
|---|---|---|
| Glucuronidase β [MD432] Concentrated | MC0687 | 1 ml |
| Glucuronidase β [MD432] Prediluted | MC0687RTU7 | 7 ml |

**IHC Procedure*:**

| | |
|---|---|
| Positive Control Tissue: | Liver, kidney, prostate carcinoma |
| Concentrated Dilution: | 25-200 |
| Pretreatment: | Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C |
| Incubation Time and Temp: | 30-60 minutes at RT |
| Detection: | Refer to the detection system manual |

* Result should be confirmed by an established diagnostic procedure.



FFPE human liver stained with anti-Glucuronidase β using DAB

## References:


1. Decreased Tissue Omega-6/Omega-3 Fatty Acid Ratio Prevents Chemotherapy-Induced Gastrointestinal Toxicity Associated with Alterations of Gut Microbiome. Kanakaraju Kaliannan, et al. Int J Mol Sci. May 10;23(10):5332, 2022.
2. Targeted inhibition of gut bacterial β-glucuronidase activity enhances anticancer drug efficacy. Aadra P, et al. Microbiology. March 13, 117 (13) 7374-7381, 2020. doi.org/10.1073/pnas.1918095117.
3. Histochemical Staining of β-Glucuronidase and Its Spatial Quantification. Chloé Béziat, et al. Methods Mol Biol. 1497:73-80, 2017. doi: 10.1007/978-1-4939-6469-7_8.





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