

**Anti-GLP-1 (Mid-molecule specific)****Mouse monoclonal antibody**

Subclass: IgG1/k

CAT. NO.

**HYB 147-12**

Clone:4F3

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**SPECIFICITY** Reacts with all forms of GLP-1, including precursor and GLP-1(9-37) /GLP-1(9-36amide) metabolite HYB 147-12 cross-reacts with Liraglutide.

**IMMUNOGEN** Synthetic GLP-1(7-36)amide coupled to carrier

**TESTED APPLICATIONS** ELISA, WB, IHC

**SPECIES REACTIVITY (POSITIVE)** Human

**SPECIES REACTIVITY (NEGATIVE)** Not determined

**EPITOPE SPECIFICITY** Mid-molecular epitope of GLP-1

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**PRESENTATION**

**Content:** Available in 200 µL and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.

**Preparation:** Protein-A purified

**Form:** Liquid

**Solvent:** 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide

**Storage:** 4-8°C without exposure to light. No precautions necessary during handling.

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**APPLICATION**

**ELISA:** HYB 147-12 binds to GLP-1 when coated directly onto the microtiter well, and binds GLP-1(7-36)amide in solution giving a  $K_a$  of  $4.0 \times 10^8$  in inhibition ELISA. HYB 147-12 cross-reacts <0.4% with coated glucagon.

In inhibition ELISA no binding of free glucagon in solution is detected, giving an estimated cross-reactivity of <0.2%.

Biotinylated HYB 147-12 is the preferred detection antibody for measuring C-terminally amidated forms of GLP-1 in combination with HYB 147-06 as capture antibody (1). HYB 147-12 can be used as a capture antibody in combination with ABS 046-03B as a detection antibody for measuring non-amidated GLP-1 forms and cross-reacting about 16% with C-terminally amidated GLP-1. Results show detection limits of 44pmol/L which is 10-20 times higher than the basal concentration of GLP-1, so the assays have to be optimized.

**WB:** In Western blotting a dilution guideline of 1/2000 has proved successful.

HYB 147-12 is applicable for immunoaffinity.

**IHC:** Although not tested, HYB 147-12 is likely to detect all known molecular forms of GLP-1 in immunohistochemistry.

**TARGET**

Glucagon-like peptide-1(7-36)amide (GLP-1(7-36)amide) is the principal active form of GLP-1, the other being GLP-1(7-37). GLP-1 is a peptide hormone of the glucagon family, produced by the L cells of the intestinal mucosa from the same prohormone as glucagon. The active forms are potent stimulators of glucose-dependent insulin secretion. The sequence of GLP-1 is fully conserved in all mammalian species examined so far.

**REFERENCES**

1. Piotrowski K, Becker M, Zugwurst J, Biller-Friedmann I, Spoettl G, Greif M, Leber AW, Becker A, Laubender RP, Lebherz C, Goeke B, Marx N, Parhofer KG, Lehrke M (2013) Circulating concentrations of GLP-1 are associated with coronary atherosclerosis in humans. *Cardiovascular Diabetology* 12:117.

**CONDITIONS**

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