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Product Information

Anti-Exendin-4 antibody produced in rabbit
Affinity isolated antibody

Product Number **SAB4200795**

Product Description

Anti-Exendin-4 antibody is developed in rabbit using synthetic peptide corresponding to the C-terminal sequence of *Heloderma suspectum* (Gila monster) Exendin-4 (20-39), conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Exendin-4 antibody specifically recognizes synthetic Exendin-4 and does not cross react with GLP-1. The antibody may be used in various immunochemical techniques including ELISA.

Exendin-4 is an incretin mimetic 39-amino-acid peptide found in venom from the Gila monster (*Helicoderma suspectum*).[1-2] Exendin-4 belongs to the glucagon-secretin family of peptide hormones and neuropeptides. It acts as a potent agonist of the GLP-1 receptor and is an insulinotropic agent (promotes insulin secretion) with a long half-life.[3]

Exendin-4 mimics the activity of mammalian incretin hormone glucagon-like peptide 1 (GLP-1) and thus plays a role in the control of glucose. This includes the secretion of insulin in a glucose-dependent manner, negative regulation of high glucagon secretion, and increased duration of stomach emptying. In type 2 diabetes patients, this peptide can be administered subcutaneously for glycemic control, when metformin is unable to produce adequate results.[2] Exendin-4 promotes the neogeneration and proliferation of β-cells, and thus aids in the regeneration of the pancreas.[3] It acts as a ligand to the exendin receptor and leads to an elevation of acinar cell cAMP levels.[1]

Exendin-4 has been used for the treatment of ob/ob mouse model to determine the glucose and insulin concentrations and homeostasis model of assessment (HOMA),[4] and for the determination of nuclear factor-κB (NF-κB) p65 level in macrophages treated with exendin-4.[5] Exenatide, a synthetic version of Exendin-4, is an FDA-approved drug for the treatment of diabetes mellitus type 2.[6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Indirect ELISA: a working concentration of 0.125-0.25 μg/mL is recommended using 1 μg/mL Exendin-4 protein for coating.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

1. Eng, J. et al., *J. Biol. Chem*., **267**, 7402-5 (1992).
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3. Hu, G. et al., *Diabetes*, **48**, 2270-6 (1999).
4. Ding, X. et al., *Hepatology*, **43**, 173-81 (2006).
5. Arakawa, M. et al., *Diabetes*, **59**, 1030-7 (2010).
6. Syed, Y.Y., and McCormack, P.L., *Drugs*, **75**, 1141-52 (2015).

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