

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human C-Peptide in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 790904
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human C-Peptide synthetic peptide EAEDLQVGQVELGGGPGAGSLQPLALEGSLQ Accession # P01308
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

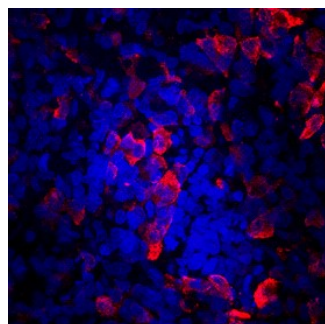
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

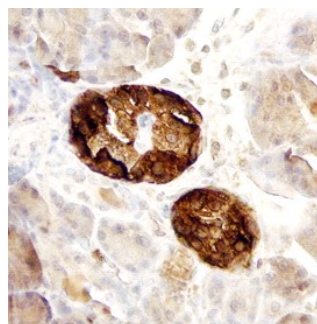
DATA

Immunocytochemistry



C-Peptide in BG01V Human Embryonic Stem Cells. C-Peptide was detected in immersion fixed BG01V human embryonic stem cells differentiated into pancreatic beta cells using Mouse Anti-Human C-Peptide Monoclonal Antibody (Catalog # MAB14171) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Stem Cells on Coverslips](#).

Immunohistochemistry



C-Peptide in Human Pancreas. C-Peptide was detected in immersion fixed paraffin-embedded sections of human pancreas using Mouse Anti-Human C-Peptide Monoclonal Antibody (Catalog # MAB14171) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm of islet cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Insulin is a peptide hormone that facilitates the cellular uptake of glucose by regulating the appearance of membrane glucose transporters. The single chain insulin propeptide consists of a 30 amino acid B chain (aa 25-54), a C-Peptide (aa 55-89), and a 21 aa A chain (aa 90-110). Removal of the C-Peptide by proteolysis enables the formation of mature Insulin, a disulfide-linked heterodimer of the A and B chains. Circulating C-peptide levels are elevated in hyperinsulinism, obesity, and type II diabetes. The human C-Peptide shares 61% and 68% aa sequence identity with mouse and rat C-Peptide, respectively.