

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Growth Hormone R/GHR in Western blots. In Western blots, approximately 10% cross-reactivity with recombinant mouse GHR and recombinant rat GHR is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Growth Hormone R/GHR Ala27-Tyr264 Accession # P10912
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

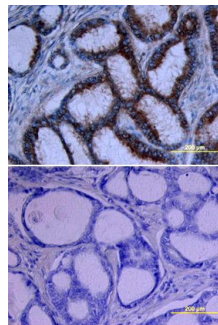
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human Growth Hormone R/GHR Fc Chimera (Catalog # 1210-GR)
Flow Cytometry	2.5 µg/10 ⁶ cells	Human whole blood CD19 ⁺ B cells
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Growth Hormone R/GHR in Human Breast Cancer Tissue. Growth Hormone R/GHR was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Goat Anti-Human Growth Hormone R/GHR Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1210) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

Growth hormone (GH), also known as somatotropin, is a member of a family of growth factors that includes prolactin, placental lactogens, proliferins and somatolactin (1, 2). It is synthesized primarily by somatotropes in the anterior pituitary and is released as an endocrine hormone. Other cells and tissues, including lymphoid tissues, can also produce GH (3). GH is a pleiotropic molecule which can act directly or indirectly via IGF-I, to regulate growth and metabolism as well as enhance T cell survival and thymic functions (1, 2, 4). GH exerts its biological actions by binding to the GH receptor (GHR) that is present in many cell types (1, 2). Human GHR cDNA encodes a 638 amino acid (aa) residue type I transmembrane protein with an 18 aa putative signal peptide, a 246 aa extracellular domain, a 24 aa transmembrane domain and a 350 aa cytoplasmic domain (5). At least two alternatively spliced isoforms of human GHR, lacking the sequence encoded by exon 3, or lacking most of the cytoplasmic domain, also exist (6, 7). Soluble GH-binding proteins corresponding to extracellular domain of the transmembrane proteins can be generated from the membrane proteins (8). Ligation of GHR by GH has been shown to result in receptor dimerization and activation of the JAK/STAT signaling cascade (9). The soluble GHBP has been shown to interfere with GH signaling by competing with the transmembrane receptor of GH. Alternatively, the GHBP has also been shown to enhance GH action by slowing GH clearance (8, 10).

References:

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