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**SM6016**

**Monoclonal Antibody to Human Growth Hormone**

**Alternate names:**
Growth hormone 1, HGH, Pituitary growth hormone

**Quantity:**
0.1 ml

**Concentration:**
1.0 mg/ml

**Background:**
Human growth hormone (hGH, somatotropin), a protein hormone from the anterior lobe of the pituitary gland, comprises a single polypeptide chain of 191 amino acid residues. The 20KDa variant form of human growth hormone (20KDa hGH) presents in extracts from pituitary glands and it differs from the major form of hGH (22KDa, 191 amino acid) by the deletion of amino acid residues 32-46. The growth hormone amino acid sequence varies considerably between species, and non-primate growth hormones have little activity in man. Main functions of hGH and 20KDa hGH are the stimulation of somatic and bone growth, as well as an increase in the size and mass of organs and tissues.

The gene, along with four other related genes, is located at the growth hormone locus on chromosome 17 where they are interspersed in the same transcriptional orientation; an arrangement which is thought to have evolved by a series of gene duplications.

The five genes share a remarkably high degree of sequence identity. Alternative splicing generates additional isoforms of each of the five growth hormones, leading to further diversity and potential for specialization. Mutations in or deletions of the gene lead to growth hormone deficiency and short stature.

**Uniprot ID:**
P01241

**NCBI:**
NP_000506.2

**GeneID:**
2688

**Host / Isotype:**
Mouse / IgG2b

**Recommended Isotype Controls:**
SM12P, AM03110PU-N

**Clone:**
g3H5

**Immunogen:**
Recombinant human Growth hormone (27 - 217 aa) purified from E. coli

**Format:**
State: Liquid purified Ig fraction

**Purification:**
Protein-G affinity chromatography

**Buffer System:**
PBS, pH 7.4 containing 0.02% Sodium Azide and 10% Glycerol

**Applications:**
ELISA.
Western blot (1/500-1/1,000).
Immunohistochemistry on Paraffin sections (10 µg/ml).

This GH antibody was validated for use in immunohistochemistry on a panel of 21 formalin-fixed, paraffin-embedded (FFPE) human tissues after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with the primary antibody, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen.
Neutralization.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: The antibody recognizes Growth Hormone (hGH) at aa 27-217.
Species Reactivity: Tested: Human, Mouse
Storage: Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.

Western blot analysis: The Recombinant protein (50ng) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human Growth hormone antibody (1:10 00). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1.: Recombinant hGH (21 - 217 aa)
Lane 2.: 20kDa hGH (27 - 202 aa)
**Immunoblot analysis:** Recombinant hGH and 20kDa hGH were resolved by electrophoresis, transferred to PVDF membrane and probed with anti-Human GH antibody (1/500). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and a DAB detection system. Arrows indicate recombinant hGH (22 kDa) and 20 kDa hGH, respectively.