

# Recombinant Human Insulin-like Growth Factor-Binding Protein 5 (rHuIGF-BP5)

## ChemWhat Technical Data Sheet (TDS)

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<b>Catalog Number:</b>	105-01B5
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 28.6 kDa, a single non-glycosylated polypeptide chain containing 252 amino acids.
<b>Quantity:</b>	5µg/25µg/1000µg
<b>AA Sequence:</b>	LGSFVHCEPC DEKALSMCPP SPLGCELVKE PGCGCCMTCA LAEQSCGVY TERCAQGLRC LPRQDEEKPL HALLHGRGVC LNEKSYREQV KIERDSREHE EPTTSEMAEE TYSPKIFRPK HTRISELKA AVKKDRRKKL TQSKFVGGAE NTAHPRIISA PEMRQEQG PCRRHMEASL QELKASPRMV PRAVYLPNCD RKGFKYKRKQC KPSRGRKRG I CWCVDKYGMK LPGMEYVDGD FQCHTFDSSN VE
<b>Purity:</b>	> 96 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by its ability to inhibit IGF-II induced proliferation of MCF-7 cells is less than 0.4 µg/ml, corresponding to a specific activity of > 2500 IU/mg in the presence of 15 ng/ml of rHuIGF-II.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 10 mM Sodium Citrate, pH 3.0.
<b>Endotoxin:</b>	Less than 0.1 EU/µg of rHuIGF-BP5 as determined by LAL method.
<b>Reconstitution:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C . Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

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### ***Human Insulin-like Growth Factor-Binding Protein 5***

The superfamily of insulin-like growth factor (IGF) binding proteins include the six high-affinity IGF binding proteins (IGFBP) and at least four additional low-affinity binding proteins referred to as IGFBP related proteins (IGFBP-rP). All IGFBP superfamily members are cysteine-rich proteins with conserved cysteine residues, which are clustered in the amino- and carboxy-terminal thirds of the molecule. IGF-BP5 is produced by vascular smooth muscle cells. It is the major IGF-binding protein present in bone tissue and helps potentiate the action of IGF-I on smooth muscle cells, fibroblasts or osteoblasts. IGFBP-5 acts as a growth inhibitor and pro-apoptotic agent in breast cancer cells. IGFBP-5 overexpressing mice show an increase in neonatal mortality, reduced female fertility, whole-body growth inhibition and retarded muscle development. Recombinant human IGF-BP5 is a 28.6 kDa protein consisting of 252 amino acid residues. Human and murine IGF-BP5 share 97 % a.a. sequence identity.

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