Data sheet

IFTA AG
Certified QMS according to
DIN EN ISO 9001
Reg. No. IC 03214 034

Jena Bioscience

GH-22K

Placental Growth Hormone-22K

human, recombinant, *E. coli*

Cat. No.	Amount
PR-429	100 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form
Lyophilized. Placental Growth Hormone protein was lyophilized from a 1 mg/ml solution with 0.0045 mM $NaHCO_3$ and pH 8.0.

Solubility
It is recommended to reconstitute and dilute the lyophilized Placental-GH in 0.4% $NaHCO_3$ adjusted to pH 8.0, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Endotoxin
Less than 0.1 ng/µg (IEU/µg) of GH.

Molecular Weight
22 kDa

Purity
≥ 95% by SDS-PAGE and RP-HPLC

Description
Placental growth hormone, or growth hormone variant (GH-V), is a member of the growth hormone gene family. Its physiologic role during pregnancy remains undefined. Although extensive work has been done characterizing the signaling pathways activated by hGH, the signaling pathways which are activated by GH-V have not been characterized.
Human placental GH (GH-22K) replaces pituitary GH during pregnancy. GH-22K is correlated to serum IGF-I in normal pregnancies and in pregnancies complicated by fetoplacental disorders.
Recombinant Placental Human GH-22K produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 192 amino acids and having a molecular mass of 22.367 kDa. GH-22K has dimished lactogenic (prolactin receptor mediated) activity characteristic to pituitary GHs.
Placental Growth Hormone is purified by proprietary chromatographic techniques.

Selected References:

Baviera *et al.* (2004) Placental growth hormone in Down's syndrome screening. *J. Matern. Fetal Neonatal. Med.* **16**:241.
Chellakooty *et al.* (2004) A longitudinal study of intrauterine growth and the placental growth hormone (GH)-insulin-like growth factor I axis in maternal circulation: association between placental GH and fetal growth. *J. Clin. Endocrinol. Metab.* **89**:384.
Fuglsang *et al.* (2004) Placental growth hormone during pregnancy in a growth hormone deficient woman with type 1 diabetes compared to a matching diabetic control group. *Growth Horm. IGF Res.* **14**:66.
Barbour *et al.* (2004) Human placental growth hormone increases expression of the p85 regulatory unit of phosphatidylinositol 3-kinase and triggers severe insulin resistance in skeletal muscle. *Endocrinology* **145**:1144.
Fuglsang *et al.* (2003) Human placental growth hormone, insulin-like growth factor I and -II, and insulin requirements during pregnancy in type 1 diabetes. *J. Clin. Endocrinol. Metab.* **88**:4355.