

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived
Ser234-Ile366 (α chain) & Gly311-Ser426 (β chain)
Accession # CAA49324 (α chain) & P08476 (β chain)

N-terminal Sequence Analysis Ser234 (α chain) & Gly311 (β chain)

Structure / Form Disulfide-linked heterodimer

Predicted Molecular Mass 14.5 kDa (α chain) & 13.0 kDa (β chain)

SPECIFICATIONS

SDS-PAGE 12-14 kDa & 17-20 kDa, reducing conditions

Activity Measured by its ability to neutralize Activin-mediated erythroid differentiation of K562 human chronic myelogenous leukemia cells. The ED₅₀ for this effect is typically 5-30 ng/mL.

Endotoxin Level <0.10 EU per 1 μg of the protein by the LAL method.

Purity >95%, by SDS-PAGE with silver staining.

Formulation Lyophilized from a 0.2 μm filtered solution in HCl with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

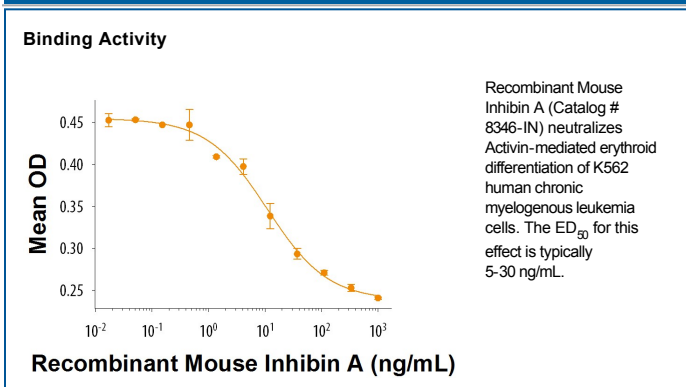
Reconstitution Reconstitute at 100 μg/mL in 4 mM HCl.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

Inhibin A is a member of the TGF- β superfamily of proteins (1). Mature Inhibin A is a disulfide-linked dimer composed of α and β subunits (1). Inhibin A shares a common α subunit with the closely related protein Inhibin B but has a unique β subunit (β A) (2-4). The mature α subunit of mouse Inhibin A has a predicted molecular weight of 14.7 kDa and shares 80% and 97% amino acid (aa) sequence identity with the human and rat orthologs, respectively. The mature β subunit of this mouse protein has a predicted molecular weight of 13 kDa and shares 93% and 100% aa sequence identity with the human and rat orthologs, respectively. Inhibin binds and antagonizes ActRIIA and ActRIIB in complex with the TGF- β RIII and/or IGSF1 co-receptors and subsequently acts to suppress Activin-induced Follicle Stimulating Hormone (FSH) secretion (1, 5-7). Inhibins are produced by gonadal cells in both males and females (8). They are thought to be involved in the regulation of gametogenesis, and embryonic and fetal development (8, 9). Elevated concentrations of Inhibins are associated with pregnancy, preeclampsia, and ovarian cancer, and Inhibin A levels are typically measured during prenatal screening for Down's syndrome (10-14).

References:

1. Phillips, D.J. and T.K. Woodruff (2004) *Growth Factors* **22**:13.
2. Ling, N. *et al.* (1985) *Proc. Natl. Acad. Sci. USA* **82**:7217.
3. Robertson, D.M. *et al.* (1985) *Biochem. Biophys. Res. Commun.* **126**:220.
4. Mason, A.J. *et al.* (1986) *Biochem. Biophys. Res. Commun.* **135**:957.
5. Lewis, K.A. *et al.* (2000) *Nature* **404**:411.
6. Martens, J.W. *et al.* (1997) *Endocrinology* **138**:2928.
7. Chapman, S.C. *et al.* (2002) *Mol. Cell. Endocrinol.* **196**:79.
8. de Kretser, D.M. and D.M. Robertson (1989) *Biol. Reprod.* **40**:33.
9. Knight, P.G. *et al.* (2012) *Mol. Cell. Endocrinol.* **359**:53.
10. Walentowicz, P. *et al.* (2014) *PLoS One* **9**:e90575.
11. Kondi-Pafiti, A. *et al.* (2013) *Clin. Exp. Obstet. Gynecol.* **40**:109.
12. Kuijper, E.A. *et al.* (2013) *Reprod. Biomed. Online* **27**:33.
13. Carty, D.M. *et al.* (2008) *Trends Cardiovasc. Med.* **18**:186.
14. Wald, N.J. *et al.* (1996) *Prenat. Diagn.* **16**:143.