

# TGF $\beta$ 2 (hBA-112): sc-4562

## BACKGROUND

Transforming growth factor betas (TGF $\beta$ s) were originally discovered due to their ability to promote anchorage-independent growth of rat NRK fibroblasts in the presence of TGF $\beta$ . It is now realized that TGF $\beta$ s mediate many cell-cell interactions that occur during embryonic development. Three TGF $\beta$ s have been identified in mammals. TGF $\beta$ 1, TGF $\beta$ 2 and TGF $\beta$ 3 are each synthesized as precursor proteins that are very similar in that each is cleaved to yield a 112 amino acid polypeptide that remains associated with the latent portion of the molecules. Biologically active TGF $\beta$  requires dimerization of the monomers (usually homodimers) and release of the latent peptide portion. Overall, the mature region of the TGF $\beta$ 3 protein has approximately 80% identity to the mature region of both TGF $\beta$ 1 and TGF $\beta$ 2. However, the NH<sub>2</sub> terminals (or precursor regions) of their molecules share only 27% sequence identity.

## REFERENCES

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## SOURCE

TGF $\beta$ 2 (hBA-112) is produced in Baculovirus as 25 kDa biologically active 112 amino acid homodimeric human TGF $\beta$ 2 protein.

## PRODUCT

TGF $\beta$ 2 (hBA-112) is purified from bacterial lysates (>98%); supplied as 5  $\mu$ g purified protein.

## BIOLOGICAL ACTIVITY

TGF $\beta$ 2 (hBA-112) is biologically active as determined by its ability to inhibit the mouse IL-4-dependent proliferation of mouse HT-2 cells.

Expected ED<sub>50</sub>: <0.2 ng/ml.

Specific Activity: Greater than 5 x 10<sup>6</sup> units/mg

## RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

## STORAGE

Store desiccated at -20° C; stable for one year from the date of shipment.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.