

RECOMBINANT MOUSE WNT-3A

CATALOG NUMBER: GF160 QUANTITY: 5 µg

LOT NUMBER:

BACKGROUND: Wnt3a, a member of the highly conserved Wnt protein family, is a 352 amino acid protein containing 23 conserved cysteines of which cysteine-77 is modified by palmitate, which is essential for receptor binding and biological activity. The Wnt3a amino acid sequence also contains an N-terminal signal peptide, which means the protein is secreted into the medium when expressed in cell culture.

Wnt3a signalling has been implicated in the control of differentiation of stem cells. Wnt proteins have been shown to regulate cell-to-cell interactions during embryogenesis, more specifically regulating mesoderm differentiation and osteogenesis. The Wnts have also been shown to have putative roles in the regulation of adult stem cells.

SOURCE: The Wnt3a supplied has been purified from conditioned media using blue-sepharose, gel filtration and heparin affinity chromatography.

PURITY: Not determined. Endotoxin level is less than 0.1 ng per µg of Wnt3a.

ACTIVITY: The purified Wnt3a protein has been shown to be bioactive as measured by its ability to induce an increase in alkaline phosphatase activity after a 4 day incubation with C2C12 myoblast cell line in the presence of BMP-2. The ED₅₀ for this effect is typically 50-100 ng/mL.

Optimal concentrations should be determined for each application.

PRESENTATION: Lyophilized from a solution containing PBS and 1.0% Chaps.

STORAGE/HANDLING: Maintain the lyophilized material at -20°C or -70°C until expiration date as stated on the label. Resuspend in sterile PBS to a concentration of 100 µg/mL. Reconstituted Wnt3a should be stored in single use aliquots at -20°C for up to six months. Once an aliquot has been defrosted, DO NOT re-freeze, store the remaining aliquot at 4°C for up to one month.

- This protein is extremely sticky and will stick to plasticware in the absence of CHAPS detergent.
- When using this protein, if possible, dose it directly onto cells at the required dilution without pre-filtering.
- The toxicity of the CHAPS in the storage buffer should be tested empirically on the cell line prior to using the Wnt3a protein.
- Generally, we suggest that a minimum dilution of Wnt3a of 1:1000 on mammalian cells results in a final concentration of CHAPS that is not toxic to the cells.
- If dosing on cells over a period of days/weeks, it is recommended that media containing Wnt3a is replenished daily, rather than dosing Wnt3a to existing media daily. This is because accumulation of CHAPS is undesirable for cell viability.

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Important Note: *During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 μ L or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.*

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