TIME Bioscience
A specialized producer of Wnt signaling products

Recombinant Murine Wnt3a

Keep Frozen Until Use

Catalog Number: rmW3aL

Source: Chinese Hamster Ovary (CHO) cell line-derived

Sequences: Ser19-Lys352

Synonyms: Protein Wnt-3a; wingless-type MMTV integration site family, member 3A; WNT3A

Purity: 75 % evaluated by SDS-PAGE under reducing conditions

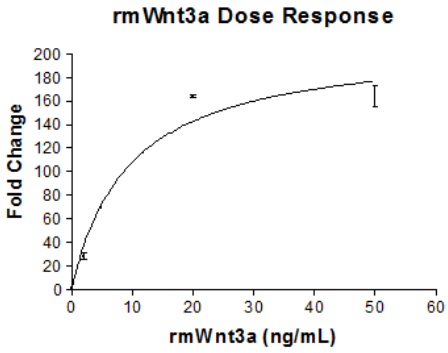
Predicted M.W.: 37 kDa

Actual M.W.: 41 kDa evaluated by SDS-PAGE under reducing conditions

Description

Protein Wnt-3a is a protein that is encoded by the WNT3A gene. The WNT gene family consists of structurally related genes that encode secreted signaling proteins. These proteins have been implicated in oncogenesis, adipogenesis, etc. and in several other developmental processes, including regulation of cell fate and patterning during embryogenesis. This gene is a member of the WNT gene family. Mouse Wnt3a shows 96% amino acid identity to human Wnt3a protein.

This protein was purified using a combination of ion exchange, affinity column with Wnt signaling inhibitor-bound Sepharose beads, and followed by gel filtration.



Concentration 40 - 80 µg/mL. Please refer to the concentration on the label of each vial

Endotoxin Level < 0.1 EU/mL Tested using LAL method

Activity: Wnt3a activity has been measured using TCF-based Wnt reporter stable cell line (Catalog: WRHEK293A-HWR). 10 ng/mL of Wnt3a (Lot: 02DEC2015) generate 100-fold increase of luciferase activity compared to control (buffer without Wnt3a). EC_{50} is about 6 ng/mL.

For organoid culture: 100 ng/mL for human colon organoids; 50 ng/mL for human intestine, primary hepatocyte, and salivary gland organoids; 150 ng/mL supports single stem cell-derived organoids.

Formulation Phosphate buffer pH 7.4-7.6, CHAPS, 0.1% BSA.

Handling and Storage Keep the protein frozen until use. Refreeze aliquots at 20°C or below. The unused solution can be refrozen without losing activity. Mix the protein by pipetting up and down only but do not use vortexer.

Purified Wnt ligands are very unstable in serum-free medium (half-life: 2 hours). To treat cells with Wnt ligands in serum-free medium, take an aliquot of Wnt ligand solution and add it into culture medium (at least 1 to 500 times dilution), and then add an aliquot of Wnt protein stabilizer (Catalog: bWps, 1 to 500- or 800-times dilution) to protect Wnt ligands.

Wnt control buffer (Phosphate buffered saline pH 7.4-7.6, CHAPS, 0.1% BSA) can serves as a control.

Reference

Saito-Diaz K., et al. APC inhibits ligand-independent Wnt signaling by the clathrin endocytic pathway. Developmental Cell 2018; 44(5):566-581.

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