Recombinant Mouse Wnt-8a

Catalog Number: 8419-WN

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived Ala20-Trp354 Accession # NP_033316
N-terminal Sequence Analysis	Ala20 & Trp23
Predicted Molecular Mass	37 kDa

SPECIFICATIONS

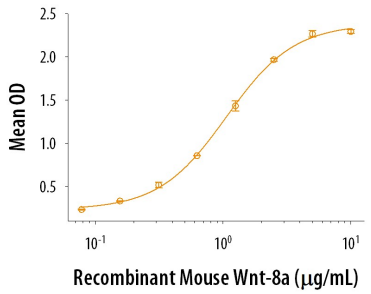
SDS-PAGE	40-62 kDa, reducing conditions
Activity	Measured by its ability to induce alkaline phosphatase production by C3H10T1/2 mouse embryonic fibroblast cells. The ED_{50} for this effect is 0.5-2.5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE with silver staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS, NaCl, EDTA and CHAPS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped with polar packs. 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.

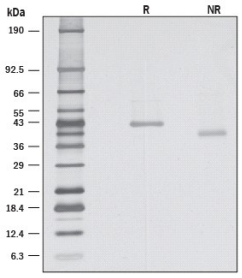
DATA

Bioactivity



Wnt-8a Induces the Production of Alkaline Phosphatase. Recombinant Mouse Wnt-8a stimulates alkaline phosphatase production by C3H10T1/2 mouse embryonic fibroblast cells. The ED_{50} for this effect is 0.5-2.5 µg/mL.

SDS-PAGE



1 µg/lane of Recombinant Mouse Wnt-8a (Catalog # 8419-WN) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing bands at 42.3 and 38.9 kDa, respectively.

BACKGROUND

Wnt-8a is a member of the large and highly conserved Wnt family of signaling molecules that have roles in pattern formation, cell fate decision, axon guidance, and tumor formation (1). Mouse Wnt-8a consists of a 19 amino acid (aa) signal peptide that is cleaved to release the mature 335 aa secreted protein (2). Mature mouse Wnt-8a shares 82% and 91% sequence identity with human and rat mature Wnt-8a, respectively. Similar to other canonical Wnts, Wnt-8a binds to the Frizzled family of receptors to intiate beta-catenin signaling. Wnt-8a is expressed during early embryogenesis and is involved in mesoderm patterning and posteriorization of the neuroectoderm (3-6). Wnt-8a signaling promotes optic lens development as well as otic placode formation during inner ear development (7, 8). Expression of Wnt-8a is observed in heart progenitor cells where it positively regulates cardiac myogenesis (9, 10).

References:

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