

Highly Stable Wnt3a

WITH REPORTER CELL LINES

Organoid Culture



UNRIVALLED
HALF-LIFE

High stability
High activity
Organoid friendly

RECOMBINANT WNT3A FOR ORGANOID CULTURE

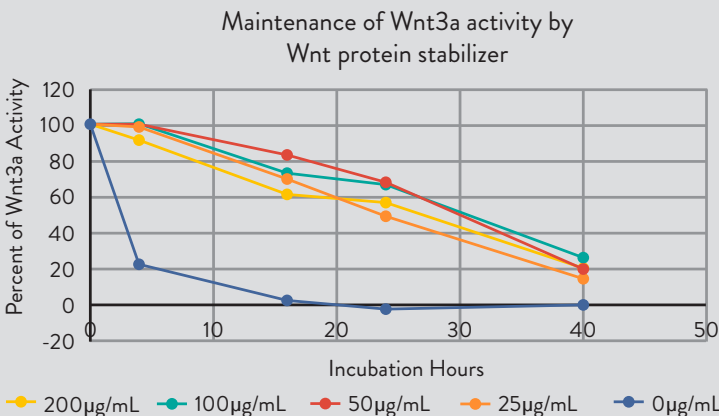
- Intact, potent, and fully functional
- Working concentration: 30 to 100 ng/mL for organoid formation
- Eliminates serum from organoid culture

Wnt proteins are a family of cysteine-rich secreted polypeptides (more than 16 mammalian family members) involved in several important cell functions such as cell-cell communication, proliferation, migration, polarity, survival and self renewal. Wnt3a particularly plays an important role in the ability of organoids to expand. Additionally, loss of activation of Wnt expression is associated with alteration of cell fate, morphogenesis and mitogenesis.

AMSBIO offers a range of Wnt human and mouse recombinant proteins in high (85 – 90%) and low (75%) purity. These human recombinant proteins are purified from HEK293 cells while the mouse proteins are expressed in CHO cells. Both are suitable for various cell based assays and treatments.

Wnt3a is highly unstable in medium without serum, aggregating in seconds. Our stabilizer significantly reduces aggregation, allowing Wnt to maintain activity for 30 hours in serum-free culture conditions. With the presence of Wnt protein stabilizer, purified Wnt3a can support even colon organoid culture that needs strong Wnt activity.

EXTENDED STABILITY

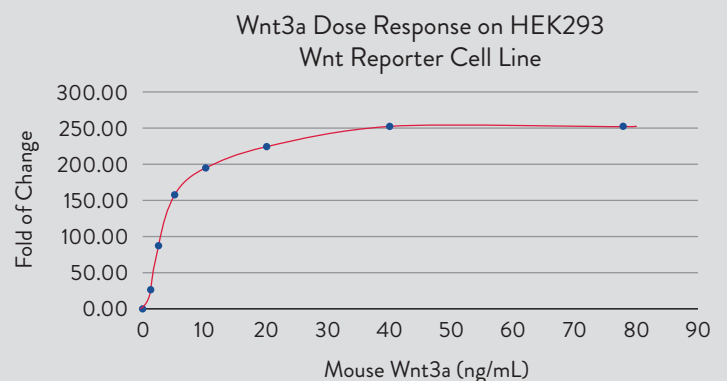


Percentage of Wnt3a activity: the Wnt3a activity without incubation, measured using Topflash, is set as 100% and the background reading is set as zero. The readings of Wnt3a activity from incubated samples at 37°C are calculated as percentage/fraction of Wnt3a without incubation.

Wnt3a activity was measured using TCF-based Wnt reporter stable cell line (Catalog: AMS.WRN1H3T3A)

HIGHEST ACTIVITY

Meaning of Fold of Change: the lumi reading without Wnt3a is set as one (background reading). All other readings are divided by background reading.



WNT REPORTER CELL LINES

- Evaluate Wnt protein bioactivity
- Screen anti-Wnt compounds/antibodies
- Screen Wnt signalling enhancer
- Evaluate Wnt protein stabilizer

Description	Feature	Catalogue No.	
Epithelial Wnt reporter cell lines			
HEK293A Wnt reporter cell lines	Active	High Wnt Response	AMS.WRHEK293A-HWR
		10ug High Endogenous Wnt Signal	AMS.WRHEK293A-HEW
	Mutant	AMS.WRHEK293M	
Colorectal cancer Wnt reporter cell lines			
HCT116 Wnt reporter cell lines	Active	AMS.WRHCT116A	
	Mutant	AMS.WRHCT116M	
SW480 Wnt reporter cell lines	Active	AMS.WRSW480A	
	Mutant	AMS.WRSW480M	
Fibroblast Wnt reporter cell line			
NIH3T3 Wnt reporter cell line	Active	AMS.WRNIH3T3A	
Pre-osteoblast Wnt reporter cell line			
MC3T3 E1 Wnt reporter cell line	Active	AMS.WRMC3T3A	

Our Wnt reporter cell lines are available in multiple cell line, as different cell types have slightly different machineries for gene expression and regulation. For instance, HEK293 are “normal” cells, while HCT116 and SW480 are colorectal cancer cell lines.

HCT116 cells harbour a beta-catenin mutation. In normal cells, beta-catenin should be degraded quickly. However, this mutation results in accumulation of it. Accumulated beta-catenin move into nucleus and activates Wnt gene expression. SW480 harbours a APC mutation.

APC is a key protein in beta-catenin degradation complex. APC mutation results in accumulation of beta-catenin. SW480 cells have very strong Wnt signalling. Researcher can use these various cell lines to investigate the effects or targets of their Wnt signalling modulators.

What Our Customers Say



“Your Wnt3a In the TOP/FOP Flash Reporter Assay Showed higher activity at the same concentration than the industry leader”

-David Keller, ETH Zurich, Nexus Personalized Health Technologies.

Our customers include:



**VANDERBILT
UNIVERSITY**



Jefferson
Philadelphia University +
Thomas Jefferson University
HOME OF SIDNEY KIMMEL MEDICAL COLLEGE



**JOHANNES GUTENBERG
UNIVERSITÄT MAINZ**




Description	Pack Size	Cat. No.
Mouse		
Recombinant Wnt3a mouse (CHO cells-derived, without any tag), (75% Purity)	2ug	AMS.rmW3aL-002
	10ug	AMS.rmW3aL-010
Recombinant Wnt3a mouse (CHO cells-derived, without any tag), (85-90% Purity)	2ug	AMS.rmW3aH-002
	10ug	AMS.rmW3aH-010
Human		
Human Recombinant Wnt3a (HEK293 cell derived), (75% purity)	2ug	AMS.rhW3aL-002
	10ug	AMS.rhW3aL-010
Human Recombinant Wnt3a (HEK293 cell derived), (85 - 90% purity)	2ug	AMS.rhW3aH-002
	10ug	AMS.rhW3aH-010
Wnt Stabilizer		
Wnt Protein Stabilizer (not sold separately)		AMS.bWps

WNT3A SAMPLES AVAILABLE TO QUALIFYING LABS

AMSBIO | www.amsbio.com | info@amsbio.com

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 **UK & Rest of the World**
184 Park Drive, Milton Park
Abingdon OX14 4SE, U.K.
T: +44 (0) 1235 828 200
F: +44 (0) 1235 820 482

 **North America**
1035 Cambridge Street,
Cambridge, MA 02141.
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

 **Germany**
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

 **Switzerland**
Centro Nord-Sud 2E
CH-6 934 Bioggio-Lugano
T: +41 (0) 91 604 55 22
F: +41 (0) 91 605 17 85

Organoid image courtesy of the Battle lab, IRN Barcelona
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