



WHAT'S NEW AT

dv

biologics®

Winter 2012

CELLutions
for Innovation™

newsletter

Products for Research in Nutrition: Nutrient Absorption, Hormonal Influence, Molecular Regulation and Beyond.

In industrialized countries, where food abundance is the norm, nutrition appears increasingly to be involved in many aspects influencing the maintenance of good health of human populations. The subject of nutrition straddles diverse disciplines of health sciences, ranging from behavioral analyses of the masses, to the study of individual preferences of food taste as governed by hormonal fluctuations during development, to the cellular process of nutrient adsorption in the intestine, to the molecular regulation of genes involved in the perception and interpretation of good tasting food.

Coldwell et al. (2009) showed a correlation between growing bones in adolescents and their high sugar preference, which opened a new venue of research in the various hormones that may be the cause or the results of bone growth and their relationships with adolescent metabolism. As partially shown in Table 1, DV Biologics offers many sought after cellular and molecular products that are essential in bone development research. Other current areas of research focus on the influence of in utero environment on taste preferences of human infants and subsequent adults (Beauchamp and Mennella, 2011), which reveals still another less well explored area of research on how flavor molecules are absorbed through the intestine of the mother and presented to the developing fetus. To this developing field of research, DV Biologics offers many essential products shown in Table 1.

DV Biologics is dedicated to offer scientists the highest quality genomic and proteomic biological products. They consist of human derived total RNA, cDNA and protein lysates, spanning various developmental stages.

All products are validated under strict quality assurance and control parameters, providing customers with reliable, quality products for reproducible results with maximum impact. Unless specified, each product is from a single source and non-pooled. Figure 1 shows how chondrogenic markers are expressed specifically in bone and cartilage products (PM007-R, and PM012-R, respectively), and how their relative levels can be estimated by real-time PCR. Figure 2 is another example of the tissue specific expression of neural markers in brain-derived products, neurospheres (PN003) and whole brain tissue (AN001, PN001).

1. Beauchamp GK, Mennella JA (2011). Flavor perception in human infants: Development and functional significance. *Digestion* 83 (Suppl 1):1-6
2. Coldwell SE, Oswald TK, and Reed DR (2009). A marker of growth differs between adolescents with high vs. low sugar preference. *Physiol Behav.* 96:574-580.

Let us know how we can advance your research needs. For a complete list of our products, visit www.dvbiologics.com!

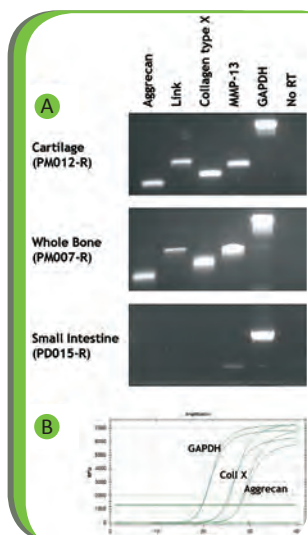


Figure 1. Expression of chondrogenic markers in human prenatal cartilage, whole bone tissue and small intestine epithelial cells. (A) cDNA is synthesized from cartilage RNA (PM012-R), whole bone RNA (PM007-R) and small intestine epithelial RNA (PD015-R) by reverse transcription with random primers, and amplified by PCR using primers specific for Aggrecan, Link, Collagen type X, Matrix metalloproteinase-MMP-13 and GAPDH. Results show that these specific markers are expressed in both cartilage and bone tissue; however these are not expressed in small intestine epithelial cells except for a low but detectable expression of MMP-13. (B) Real Time PCR was performed using cartilage tissue cDNA, amplified using specific primers for Collagen type X, and Aggrecan; GAPDH was used as internal control. Results show that Collagen type X and Aggrecan are expressed in cartilage.

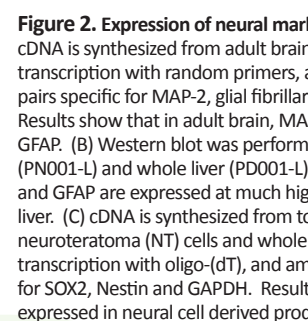


Figure 2. Expression of neural markers in human brain tissue. (A) cDNA is synthesized from adult brain tissue RNA (AN001-R) by reverse transcription with random primers, and amplified by PCR using primer pairs specific for MAP-2, glial fibrillary acid protein (GFAP) and GAPDH. Results show that in adult brain, MAP-2 expression may be lower than GFAP. (B) Western blot was performed using lysates of whole brain (PN001-L) and whole liver (PD001-L). Results show that β tubulin III and GFAP are expressed at much higher levels in neural tissue than in liver. (C) cDNA is synthesized from total RNA of prenatal neurospheres, neuroteratoma (NT) cells and whole prenatal brain by reverse transcription with oligo-(dT), and amplified using primer pairs specific for SOX2, Nestin and GAPDH. Results show that SOX2 and Nestin are expressed in neural cell derived products.

Table 1: Cellular and genomic products used in research of skeletal, neural and digestive systems.

Product	Unit size	SKU	Price
Human Whole Unprocessed Bone Marrow Total RNA	AH001-R	10 μ g	\$250.00
Human Whole Unprocessed Bone Marrow cDNA	AH001-CD	20 rxns	\$250.00
Human Bone Marrow Stromal Cell Total RNA	AH005-R	10 μ g	\$700.00
Human Bone Marrow Stromal Cell cDNA	AH005-CD	20 rxns	\$550.00
Human Bone Marrow Stromal Cell Lysate	AH005-L	100 μ g	\$500.00
Human Osteoblast Pellet	AM005-CP	2.5 \times 10 ⁶ cells	\$400.00
Human Osteoblast Total RNA	AM005-R	10 μ g	\$350.00
Human Osteoblast cDNA	AM005-CD	20 rxns	\$300.00
Human Osteoblast Lysate	AM005-L	100 μ g	\$300.00
Human Whole Bone Total RNA	AM007-R	10 μ g	\$150.00
Human Whole Bone cDNA	AM007-CD	20 rxns	\$170.00
Human Cartilage Total RNA	AM009-R	1 μ g	\$500.00
Human Cartilage cDNA	AM009-CD	20 rxns	\$500.00
Human Neural cDNA	AN001-CD	10 rxns	\$220.00
Human Whole Intestine Total RNA	PD006-R	10 μ g	\$40.00
Human Whole Intestine cDNA	PD006-CD	20 rxns	\$170.00
Human Whole Intestine Tissue Lysate	PD006-L	100 μ g	\$130.00

Table 1: Cellular and genomic products used in research of skeletal, neural and digestive systems.

Human Whole Intestine Frozen Tissue Block	PD006-FS	1 block	Call
Human Small Intestine Cells (Uncultured)	PD007-F	0.5×10 ⁶ cells	\$300.00
Human Whole Small Intestine Total RNA	PD007-R	10µg	\$40.00
Human Whole Small Intestine cDNA	PD007-CD	20 rxns	\$170.00
Human Whole Small Intestine Tissue Lysate	PD007-L	100µg	\$130.00
Human Whole Small Intestine Frozen Tissue Block	PD007-FS	1 block	Call
Human Large Intestine Cells (Uncultured)	PD008-F	0.5×10 ⁶ cells	\$300.00
Human Whole Large Intestine Total RNA	PD008-R	10µg	\$40.00
Human Whole Large Intestine cDNA	PD008-CD	20 rxns	\$170.00
Human Whole Large Intestine Tissue Lysate	PD008-L	100µg	\$130.00
Human Small Intestine Epithelial Cells	PD015-F	0.5×10 ⁶ cells	\$700.00
Human Small Intestine Epithelial Cell Pellet	PD015-CP	2.5×10 ⁶ cells	\$700.00
Human Small Intestine Epithelial Cells Total RNA	PD015-R	10µg	\$600.00
Human Small Intestine Epithelial Cells cDNA	PD015-CD	20 rxns	\$550.00
Human Whole Unprocessed Bone Marrow Total RNA	PH001-R	10µg	\$400.00
Human Whole Unprocessed Bone Marrow cDNA	PH001-CD	20 rxns	\$350.00
Human CD34+ Bone Marrow Cell Total RNA	PH003-R	1µg	\$1,200.00
Human CD34+ Bone Marrow Cell cDNA	PH003-CD	20 rxns	\$1,200.00
Human CD133+ Bone Marrow Cell Total RNA	PH004-R	1µg	\$2,400.00
Human CD133+ Bone Marrow Cell cDNA	PH004-CD	20 rxns	\$2,200.00
Human Bone Marrow Stromal Cell Total RNA	PH005-R	10µg	\$800.00
Human Bone Marrow Stromal Cell cDNA	PH005-CD	20 rxns	\$600.00
Human Bone Marrow Stromal Cell Lysate	PH005-L	100µg	\$500.00
Human Osteoblast Pellet	PM005-CP	2.5×10 ⁶ cells	\$300.00
Human Osteoblast Total RNA	PM005-R	10µg	\$250.00
Human Osteoblast cDNA	PM005-CD	20 rxns	\$200.00
Human Whole Bone Total RNA	PM007-R	10µg	\$120.00
Human Whole Bone cDNA	PM007-CD	20 rxns	\$170.00
Human Whole Bone Tissue Lysate	PM007-L	100µg	\$130.00
Human Neural Total RNA	PN001-R	10µg	\$40.00
Human Neural cDNA	PN001-CD	20 rxns	\$170.00
Human Neural Tissue Lysate	PN001-L	100µg	\$130.00
Human Neural Frozen Tissue Block	PN001-FS	1 block	Call
Human Spinal Cord Frozen Tissue Block	PN002-FS	1 block	Call
Human Neural Progenitor Cells Total RNA	PN003-R	1µg	\$500.00
Human Neural Progenitor Cells cDNA	PN003-CD	20 rxns	\$450.00
Human Neural Progenitor Cell Lysate	PN003-L	100µg	\$500.00
Human PSA-NCAM Positive (PSA-NCAM+) Neural Cells Total RNA	PN004-R	10µg	\$1,100.00
Human PSA-NCAM Positive (PSA-NCAM+) Neural Cells cDNA	PN004-CD	20 rxns	\$1,000.00
Human PSA-NCAM Positive (PSA-NCAM+) Neural Cell Lysate	PN004-L	100µg	\$1,100.00
Human A2B5 Positive (A2B5+) Neural Cell Total RNA	PN006-R	10µg	\$1,100.00
Human A2B5 Positive (A2B5+) Neural Cell cDNA	PN006-CD	20 rxns	\$1,000.00
Human A2B5 Positive (A2B5+) Neural Cell Lysate	PN006-L	100µg	\$1,100.00



Ways To Place An Order

Contact Us:

By phone 1.888.773.5959 (Toll Free North America)

By fax 1.877.773.5959 (Toll Free North America)

By email orders@dvbiologics.com

Ordering Hours:

Monday through Friday, 9:00 am - 5:00 pm Pacific Standard Time.

Order anytime, 24 hours a day, 365 days a year by email or fax. If your order arrives outside our normal business hours, it will be quickly processed at the beginning of the next business day.

1239 Victoria Street ♦ Costa Mesa ♦ CA ♦ 92627 ♦ Tel . (888) 773-5959 ♦ Fax . (877) 773-5959