

Doxycycline Levels 40 mg/kg - 100 mg/kg

Tissue Type	Research Category	Doxycycline Level	Product code	Base Diet Code	Citation	Link
Central Nervous System	Cognition	40 ppm	TD.10483	2018	Du J, Koffman EE. Labeling Aversive Memory Trace in Mouse Using a Doxycycline-inducible Expression System. <i>Bio Protoc.</i> 2017 Oct 20;7(20):e2578.	CLICK
Central Nervous System	Addiction	40 ppm	TD.120240	2018	Nawarawong NN, Olsen CM. Within-animal comparisons of novelty and cocaine neuronal ensemble overlap in the nucleus accumbens and prefrontal cortex. <i>Behav Brain Res.</i> 2020 Feb 3;379:112275.	CLICK
Central Nervous System	Pain	40 mg/kg	TD.120240	2018	Sarka, B. C., Liu, S., Banerjee, A., Stucky, C. L., Liu, Q. S., & Olsen, C. M. (2023). Neuropathic pain has sex-specific effects on oxycodone seeking and drug-seeking ensembles in the dorsomedial prefrontal cortex. <i>bioRxiv</i> , 2023-07.	CLICK
Central Nervous System	Addiction	100 mg/kg	TD.130840	2018	Thannickal, T. C., John, J., Shan, L., Swaab, D. F., Wu, M. F., Ramanathan, L., ... & Siegel, J. M. (2018). Opiates increase the number of hypocretin-producing cells in human and mouse brain and reverse cataplexy in a mouse model of narcolepsy. <i>Science translational medicine</i> , 10(447), eaao4953.	CLICK
Central Nervous System	Alzheimer's	100 mg/kg	TD.04233	2018	Liu, M., Beckett, T. L., Thomason, L. A., Dorr, A., Stefanovic, B., & McLaurin, J. (2021). Covert strokes prior to Alzheimer's disease onset accelerate peri-lesional pathology but not cognitive deficits in an inducible APP mouse model. <i>Brain Research</i> , 1754, 147233.	CLICK
Colorectal cancer	Muscle Wasting	"100 mg/kg (partial repression) 625 mg/kg (complete repression)"	"TD.130840 TD.01306"	2018	Leong, M. L., Karjalainen, K., & Ruedl, C. (2022). TCF7L2 is a master regulator of muscle wasting in severe cancer cachexia. <i>Research Square</i> .	CLICK
Mammary	Cancer	100 mg/kg	TD.190069	custom 2018 with isolated soy protein	Watson, K. L., Sauerzopf, K., & Moorehead, R. A. (2021). Isolated soy protein promotes mammary tumor development induced by the Type I insulin-like growth factor receptor in transgenic mice. <i>Nutrition and Cancer</i> , 73(8), 1340-1349.	CLICK

Doxycycline Levels 200 mg/kg - 400 mg/kg

Tissue Type	Research Category	Doxycycline Level	Product code	Base Diet Code	Citation	Link
Blood	Cancer	400 mg/kg	TD.10777	2018	Fisher, J. N., Thanasopoulou, A., Juge, S., Tzankov, A., Bagger, F. O., Mendez, M. A., ... & Schwaller, J. (2020). Transforming activities of the NUP98-KMT2A fusion gene associated with myelodysplasia and acute myeloid leukemia. <i>haematologica</i> , 105(7), 1857.	CLICK
Brain, adipocytes	Neurodegeneration	300 mg/kg	TD.180830	TD.88137	Sodhi, K., Pratt, R., Wang, X., Lakhani, H. V., Pillai, S. S., Zehra, M., ... & Shapiro, J. I. (2021). Role of adipocyte Na, K-ATPase oxidant amplification loop in cognitive decline and neurodegeneration. <i>Iscience</i> , 24(11).	CLICK
Central Nervous System	Neurodegeneration	200 mg/kg	TD.08839	5001	Afroz, T., Chevalier, E., Audrain, M., Dumayne, C., Ziehm, T., Moser, R., ... & Seredenina, T. (2023). Immunotherapy targeting the C-terminal domain of TDP-43 decreases neuropathology and confers neuroprotection in mouse models of ALS/FTD. <i>Neurobiology of Disease</i> , 179, 106050.	CLICK
Central Nervous System	Alzheimer's	200 mg/kg (tamoxifen also in diet)	TD.00502	2015	Kim, D. W., Tu, K. J., Wei, A., et al. (2022). Amyloid-beta and tau pathologies act synergistically to induce novel disease stage-specific microglia subtypes. <i>Molecular Neurodegeneration</i> , 17, 83. https://doi.org/10.1186/s13024-022-00589-x	CLICK
Heart	Cardiomyopathy	200 mg/kg	TD.00502	2018	Vanhoutte, D., Schips, T. G., Vo, A., Grimes, K. M., Baldwin, T. A., Brody, M. J., ... & Molkentin, J. D. (2021). Thbs1 induces lethal cardiac atrophy through PERK-ATF4 regulated autophagy. <i>Nature Communications</i> , 12(1), 3928.	CLICK
Skeletal Muscle	Aging	200 mg/kg	TD.190708	8604	Tavoian, D., Arnold, W. D., Mort, S. C., & de Lacalle, S. (2019). Sex differences in body composition but not neuromuscular function following long-term, doxycycline-induced reduction in circulating levels of myostatin in mice. <i>PloS one</i> , 14(11), e0225283.	CLICK
Skin	Cancer	200 mg/kg	TD.00502	2018	Vuković, L. D., Chen, P., Mishra, S., White, K. H., Gigley, J. P., & Levy, D. L. (2021). Nuclear Transport Factor 2 (NTF2) suppresses WM983B metastatic melanoma by modifying cell migration, metastasis, and gene expression. <i>Scientific Reports</i> , 11(1), 23586.	CLICK

Doxycycline Levels 625 mg/kg

Tissue Type	Research Category	Doxycycline Level	Product code	Base Diet Code	Citation	Link
Blood	Cancer	625 mg/kg	TD.01306	2018	Bencomo-Alvarez, A. E., Rubio, A. J., Olivas, I. M., Gonzalez, M. A., Ellwood, R., Fiol, C. R., ... & Eiring, A. M. (2021). Proteasome 26S subunit, non-ATPases 1 (PSMD1) and 3 (PSMD3), play an oncogenic role in chronic myeloid leukemia by stabilizing nuclear factor-kappa B. <i>Oncogene</i> , 40(15), 2697-2710.	CLICK
Blood	Gene editing	625 mg/kg	TD.01306	2018	Kelkar, A., Zhu, Y., Groth, T., Stolfa, G., Stablewski, A. B., Singhi, N., ... & Neelamegham, S. (2020). Doxycycline-dependent self-inactivation of CRISPR-Cas9 to temporally regulate on-and off-target editing. <i>Molecular Therapy</i> , 28(1), 29-41.	CLICK
Blood	Cancer	625 mg/kg	TD.01306	2018	Lara, J. J., Bencomo-Alvarez, A. E., Gonzalez, M. A., Olivas, I. M., Young, J. E., Lopez, J. L., ... & Eiring, A. M. (2022). 19S proteasome subunits as oncogenes and prognostic biomarkers in FLT3-Mutated Acute myeloid leukemia (AML). <i>International Journal of Molecular Sciences</i> , 23(23), 14586.	CLICK
Blood	Cancer	625 mg/kg	TD.120769	2018	Wan, J., Block, S., Scribano, C. M., Thiry, R., Esbona, K., Audhya, A., & Weaver, B. A. (2019). Mad1 destabilizes p53 by preventing PML from sequestering MDM2. <i>Nature Communications</i> , 10(1), 1540.	CLICK
Bone	Aging	625 mg/kg	TD.150087	8604	Pierce, J. L., Sharma, A. K., Roberts, R. L., Yu, K., Irsik, D. L., Choudhary, V., ... & McGee-Lawrence, M. E. (2022). The glucocorticoid receptor in osterix-expressing cells regulates bone mass, bone marrow adipose tissue, and systemic metabolism in female mice during aging. <i>Journal of Bone and Mineral Research</i> , 37(2), 285-302.	CLICK
Bone	Development	625 mg/kg	TD.120769	2018	LaCombe, J. M. (2021). DYRK1A-Related Trabecular Defects in Male Ts65Dn Mice Emerge During a Critical Developmental Window (Doctoral dissertation).	CLICK
Bone	Regenerative Medicine	625 mg/kg	TD.01306	2018	Matthews BG, Novak S, Sbrana FV, et al. Heterogeneity of murine periosteum progenitors involved in fracture healing. <i>Elife</i> . 2021;10:e58534.	CLICK
Bone	Exercise	625 mg/kg	TD.110720	2020	Gardinier, J. D., Daly-Seiler, C., Rostami, N., Kundal, S., & Zhang, C. (2019). Loss of the PTH/PTHrP receptor along the osteoblast lineage limits the anabolic response to exercise. <i>PLoS one</i> , 14(1), e0211076.	CLICK
Brain	Sensory	625 mg/kg	Teklad cited		Pancholi, R., Sun-Yan, A., & Peron, S. (2023). Microstimulation of sensory cortex engages natural sensory representations. <i>Current Biology</i> , 33(9), 1765-1777.	CLICK
Brain	Sensory	625 mg/kg	TD.05125	7012	Morandell, K., Yin, A., Del Rio, R. T., & Schneider, D. M. (2023). Movement-related modulation in mouse auditory cortex is widespread yet locally diverse. <i>bioRxiv</i> , 2023-07.	CLICK
Brain	Cancer	625 mg/kg	TD.180625	2018	Fala, M., Ros, S., Sawle, A., Rao, J. U., Tsyben, A., Tronci, L., ... & Brindle, K. M. (2023). The role of branched-chain aminotransferase 1 in driving glioblastoma cell proliferation and invasion varies with tumor subtype. <i>Neuro-Oncology Advances</i> , 5(1), vdad120.	CLICK
cAMP Cancers	Cancer	625 mg/kg	TD.01306	2018	Drozd, M. M., Doane, A. S., Alkallas, R., Desman, G., Bareja, R., Reilly, M., ... & Zippin, J. H. (2022). A nuclear cAMP microdomain suppresses tumor growth by Hippo pathway inactivation. <i>Cell reports</i> , 40(13).	CLICK

Doxycycline Levels 625 mg/kg

Tissue Type	Research Category	Doxycycline Level	Product code	Base Diet Code	Citation	Link
Eye	Regenerative Medicine	625 mg/kg	TD.01306	2018	Finburgh, E. N., Mauduit, O., Noguchi, T., Bu, J. J., Abbas, A. A., Hakim, D. F., ... & Afshari, N. A. (2023). Role of FGF10/FGFR2b Signaling in Homeostasis and Regeneration of Adult Lacrimal Gland and Corneal Epithelium Proliferation. <i>Investigative Ophthalmology & Visual Science</i> , 64(1), 21-21.	CLICK
Fungal Virulence	Infectious Disease	625 mg/kg	TD.120769	2018	Dunker, C., Polke, M., Schulze-Richter, B., Schubert, K., Rudolphi, S., Gressler, A. E., ... & Jacobsen, I. D. (2021). Rapid proliferation due to better metabolic adaptation results in full virulence of a filament-deficient <i>Candida albicans</i> strain. <i>Nature communications</i> , 12(1), 3899.	CLICK
Fungal Virulence	Infectious Disease	625 mg/kg	Teklad cited		Stewart, J. I., Fava, V. M., Kerkaert, J. D., Subramanian, A. S., Gravelat, F. N., Lehoux, M., ... & Sheppard, D. C. (2020). Reducing <i>Aspergillus fumigatus</i> virulence through targeted dysregulation of the conidiation pathway. <i>Mbio</i> , 11(1), 10-1128.	CLICK
Heart	Ischemic Injury	625 mg/kg	TD.130141	2020	Szulik MW, Valdez S, Walsh M, et al. SMYD1a protects the heart from ischemic injury by regulating OPA1-mediated cristae remodeling and supercomplex formation. <i>Basic Res Cardiol</i> . 2023;118(1):20.	CLICK
Heart	Cardiomyopathy	625 mg/kg	TD.01306	2018	Cole, L. K., Mejia, E. M., Sparagna, G. C., Vandell, M., Xiang, B., Han, X., ... & Hatch, G. M. (2020). Cardiolipin deficiency elevates susceptibility to a lipotoxic hypertrophic cardiomyopathy. <i>Journal of molecular and cellular cardiology</i> , 144, 24-34.	CLICK
Intestine	Cancer	625 mg/kg	TD.01306	2018	Chen, M. S., Lo, Y. H., Chen, X., Williams, C. S., Donnelly, J. M., Criss, Z. K., ... & Shroyer, N. F. (2019). Growth Factor-Independent 1 Is a Tumor Suppressor Gene in Colorectal Cancer. <i>Molecular Cancer Research</i> , 17(3), 697-708.	CLICK
KRAS Oncogenic Events	Cancer	625 mg/kg	TD.01306	2018	Kim, D. G., Choi, Y., Lee, Y., Lim, S., Kong, J., Song, J., ... & Kim, S. (2022). AIMP2-DX2 provides therapeutic interface to control KRAS-driven tumorigenesis. <i>Nature communications</i> , 13(1), 2572.	CLICK
Liver	Cancer	625 mg/kg	Teklad cited		Chen, H. A., Ho, Y. J., Mezzadra, R., Adrover, J. M., Smolkin, R., Zhu, C., ... & Lowe, S. W. (2023). Senescence rewires microenvironment sensing to facilitate antitumor immunity. <i>Cancer discovery</i> , 13(2), 432-453.	CLICK
Liver	Cancer	625 mg/kg	Teklad cited		Kendre, G., Marhenke, S., Lorz, G., Becker, D., Reineke-Plaaß, T., Poth, T., ... & Saborowski, A. (2021). The Co-mutational Spectrum Determines the Therapeutic Response in Murine FGFR2 Fusion-Driven Cholangiocarcinoma. <i>Hepatology</i> , 74(3), 1357-1370.	CLICK
Lung	Fibrosis	625 mg/kg	TD.02503	2016	Kovalchuk, N., Jilek, J. L., Van Winkle, L. S., Cherrington, N. J., & Ding, X. (2022). Role of lung P450 oxidoreductase in paraquat-induced collagen deposition in the lung. <i>Antioxidants</i> , 11(2), 219.	CLICK
Lung	Cancer	625 mg/kg	TD.01306		Sengupta, D., Zeng, L., Li, Y., Hausmann, S., Ghosh, D., Yuan, G., ... & Gozani, O. (2021). NSD2 dimethylation at H3K36 promotes lung adenocarcinoma pathogenesis. <i>Molecular cell</i> , 81(21), 4481-4492.	CLICK
Lung	Development	625 mg/kg	TD.09761	2019	Volckaert, T., Yuan, T., Yuan, J., Boateng, E., Hopkins, S., Zhang, J. S., ... & De Langhe, S. P. (2019). Hippo signaling promotes lung epithelial lineage commitment by curbing Fgf10 and β -catenin signaling. <i>Development</i> , 146(2), dev166454.	CLICK

Doxycycline Levels 625 mg/kg

Tissue Type	Research Category	Doxycycline Level	Product code	Base Diet Code	Citation	Link
Mammary	Cancer	625 mg/kg	Teklad cited		Radic Shechter, K., Kafkia, E., Zirngibl, K., Gawrzak, S., Alladin, A., Machado, D., ... & Jechlinger, M. (2021). Metabolic memory underlying minimal residual disease in breast cancer. <i>Molecular Systems Biology</i> , 17(10), e10141.	CLICK
Mammary	Cancer	625 mg/kg	Teklad cited		Salgueiro, L., Buccitelli, C., Rowald, K., Somogyi, K., Kandala, S., Korbel, J. O., & Sotillo, R. (2020). Acquisition of chromosome instability is a mechanism to evade oncogene addiction. <i>EMBO Molecular Medicine</i> , 12(3), e10941.	CLICK
Mammary	Cancer	625 mg/kg	TD.01306	2018	Ozturk, M. S., Montero, M. G., Wang, L., Chaible, L. M., Jechlinger, M., & Prevedel, R. (2020). In-vivo monitoring and quantification of breast cancer growth dynamics with non-invasive intravital mesoscopic fluorescence molecular tomography. <i>bioRxiv</i> , 2020-08.	CLICK
Mammary	Cancer	625 mg/kg	TD.120769	2018	Scribano, C. M., Wan, J., Esbona, K., Tucker, J. B., Lasek, A., Zhou, A. S., ... & Weaver, B. A. (2021). Chromosomal instability sensitizes patient breast tumors to multipolar divisions induced by paclitaxel. <i>Science translational medicine</i> , 13(610), eabd4811.	CLICK
Oral Mucosa	Stem Cell Biology	625 mg/kg	TD.08541	2018	Byrd, K. M., Piehl, N. C., Patel, J. H., Huh, W. J., Sequeira, I., Lough, K. J., ... & Williams, S. E. (2019). Heterogeneity within stratified epithelial stem cell populations maintains the oral mucosa in response to physiological stress. <i>Cell Stem Cell</i> , 25(6), 814-829.	CLICK
Pancreas	Cancer	625 mg/kg	Teklad cited		Burdziak, C., Alonso-Curbelo, D., Walle, T., Barriga, F. M., Reyes, J., Xie, Y., ... & Pe'er, D. (2022). Epigenetic plasticity cooperates with emergent cell-cell interactions to drive neoplastic tissue remodeling in the pancreas. <i>Biorxiv</i> , 2022-07.	CLICK
Pancreas	Cancer	625 mg/kg	Teklad cited		Alonso-Curbelo, D., Ho, Y. J., Burdziak, C., Maag, J. L., Morris IV, J. P., Chandwani, R., ... & Lowe, S. W. (2021). A gene-environment-induced epigenetic program initiates tumorigenesis. <i>Nature</i> , 590(7847), 642-648.	CLICK
Pancreas	Endocrinology	625 mg/kg	TD.01306	2018	Cole LK, Agarwal P, Doucette CA, Fonseca M, Xiang B, Sparagna GC, Seshadri N, Vandel M, Dolinsky VW, Hatch GM. Tafazzin Deficiency Reduces Basal Insulin Secretion and Mitochondrial Function in Pancreatic Islets From Male Mice. <i>Endocrinology</i> . 2021 Jul 1;162(7):bqab102.	CLICK
Pancreas	Cancer	625 mg/kg	TD.130141	2020	Brown, W. S., McDonald, P. C., Nemirovsky, O., Awrey, S., Chafe, S. C., Schaeffer, D. F., ... & Dedhar, S. (2020). Overcoming adaptive resistance to KRAS and MEK inhibitors by co-targeting mTORC1/2 complexes in pancreatic cancer. <i>Cell Reports Medicine</i> , 1(8).	CLICK
Prostate	Cancer	625 mg/kg	Teklad cited		Ganapathy, K., Ngo, C., Andl, T., Coppola, D., Park, J., & Chakrabarti, R. (2022). Anticancer function of microRNA-30e is mediated by negative regulation of HELLPAR, a noncoding macroRNA, and genes involved in ubiquitination and cell cycle progression in prostate cancer. <i>Molecular Oncology</i> , 16(16), 2936-2958.	CLICK
Respiratory	Regenerative Medicine	625 mg/kg	TD.09761	2019	Yuan, T., Volckaert, T., Redente, E. F., Hopkins, S., Klinkhammer, K., Wasnick, R., ... & De Langhe, S. P. (2019). FGF10-FGFR2B signaling generates basal cells and drives alveolar epithelial regeneration by bronchial epithelial stem cells after lung injury. <i>Stem cell reports</i> , 12(5), 1041-1055.	CLICK
Skin	Cancer	625 mg/kg	TD.08541	2018	Grigore, F., Yang, H., Hanson, N. D., VanBrocklin, M. W., Sarver, A. L., & Robinson, J. P. (2020). BRAF inhibition in melanoma is associated with the dysregulation of histone methylation and histone methyltransferases. <i>Neoplasia</i> , 22(9), 376-389.	CLICK

Doxycycline Levels 1000 mg/kg - 6000 mg/kg

Tissue Type	Research Category	Doxycycline Level	Product code	Base Diet Code	Citation	Link
Blood	Cancer	1000 mg/kg	TD.120658	2018	An N, Khan S, Imgruet MK, Jueng L, Gurbuxani S, McNERney ME. Oncogenic RAS promotes leukemic transformation of CUX1-deficient cells. <i>Oncogene</i> . 2023 Mar;42(12):881-893.	CLICK
Central Nervous System	Gene Therapy	6000 mg/kg	TD.09282	2018	Eggers, R., de Winter, F., Arkenaar, C., Tannemaat, M. R., & Verhaagen, J. (2019). Enhanced regeneration and reinnervation following timed GDNF gene therapy in a cervical ventral root avulsion. <i>Experimental Neurology</i> , 321, 113037.	CLICK
Central Nervous System	Behaviour	6000 mg/kg	TD.09282	2018	League, A. F., Gorman, B. L., Hermes, D. J., Johnson, C. T., Jacobs, I. R., Yadav-Samudrala, B. J., ... & Fitting, S. (2021). Monoacylglycerol lipase inhibitor MJN110 reduces neuronal hyperexcitability, restores dendritic arborization complexity, and regulates reward-related behavior in presence of HIV-1 Tat. <i>Frontiers in Neurology</i> , 12, 651272.	CLICK
Central Nervous System	Gene Therapy	6000 mg/kg	TD.09282	2018	De Winter F, Quijorna IF, Burnside E, et al. Characterization of an immune-evading doxycycline-inducible lentiviral vector for gene therapy in the spinal cord. <i>Exp Neurol</i> . 2022;355:114120.	CLICK
Diabetes	Regenerative Medicine	2000 mg/kg	TD.05512	2018	Xi, Y., Song, B., Ngan, I., Solloway, M. J., Humphrey, M., Wang, Y., ... & Liu, Z. (2022). Glucagon-receptor-antagonism-mediated β -cell regeneration as an effective anti-diabetic therapy. <i>Cell Reports</i> , 39(9).	CLICK
Eye	Degeneration	2000 mg/kg	TD.05512	2018	Amamoto, R., Wallick, G. K., & Cepko, C. L. (2022). Retinoic acid signaling mediates peripheral cone photoreceptor survival in a mouse model of retina degeneration. <i>Elife</i> , 11, e76389.	CLICK
Lung	Hypoxic pulmonary vasoconstriction	2000 mg/kg	TD.140011	2018	Krauszman A, Mak TW, Szaszi K, Kuebler WM. Role of phosphatase and tensin homolog in hypoxic pulmonary vasoconstriction. <i>Cardiovasc Res</i> . 2017 Jul 1;113(8):869-878.	CLICK
Ovarian	Cancer	1000 mg/kg	TD.06294	2018	Chaves-Moreira, D., Mitchell, M. A., Arruza, C., Rawat, P., Sidoli, S., Nameki, R., ... & Drapkin, R. (2020). PAX8 orchestrates an angiogenic program through interaction with SOX17. <i>BioRxiv</i> , 2020-09.	CLICK
Ovarian	Reproductive Phenotype	6000 mg/kg	TD.120489	2020X	Secchi, C., Belli, M., Harrison, T. N., Swift, J., Ko, C., Duleba, A. J., ... & Shimasaki, S. (2021). Effect of the spatial-temporal specific theca cell Cyp17 overexpression on the reproductive phenotype of the novel TC17 mouse. <i>Journal of Translational Medicine</i> , 19, 1-15.	CLICK
Skin	Development	1000 mg/kg	TD.120658	2018	Li, Y., Tang, L., Yue, J., Gou, X., Lin, A., Weatherbee, S. D., & Wu, X. (2020). Regulation of Epidermal Differentiation through KDF 1-mediated Deubiquitination of IKK α . <i>EMBO reports</i> , 21(5), e48566.	CLICK
Treatment Resistance	Cancer	1000 mg/kg	TD.05298	2018	Joung, J., Kirchgatterer, P.C., Singh, A. et al. CRISPR activation screen identifies BCL-2 proteins and B3GNT2 as drivers of cancer resistance to T cell-mediated cytotoxicity. <i>Nat Commun</i> 13, 1606 (2022).	CLICK