

## Summary by Chemical of Carcinogenicity Results in the CPDB from Technical Reports of the National Cancer Institute/National Toxicology Program (NCI/NTP)

**Positivity:** For each positive chemical in the CPDB, results are included on positivity and target site (by sex-species). A target site is listed for a chemical in a sex-species group if the evaluation in the Technical Report was “carcinogenic” or “clear” or “some” evidence of carcinogenic activity. If the highest level of evidence was “clear” or “carcinogenic” then the target site appears without superscripts. If “some” evidence is the highest level of evidence, an “s” superscript is reported after the target site. An NCI evaluation of “associated with carcinogenicity” or an NTP evaluation of “equivocal evidence of carcinogenicity” are not considered positive. If the highest level of evidence in a sex-species group was “equivocal” then “-<sup>e</sup>” appears, and if the highest level was “associated” then “-<sup>a</sup>” appears. We use the author’s opinion to classify positivity because it often takes into account more information than statistical significance alone, such as historical control rates for particular strains and sites, survival and latency, and/or dose response. Generally, this designation by author’s opinion corresponds well with the results of statistical tests for the significance of the dose-response effect (two-tailed  $p < 0.01$ ).

If results in the NCI/NTP bioassay are negative in a group, “-” appears. If a sex-species group was not tested by NCI/NTP, “.” appears.

### NCI/NTP evaluation of carcinogenic activity in the sex-species group is reported in the columns of target sites

<b>target site</b>	=	The level of evidence for the target site is “carcinogenic” for NCI bioassays or “clear evidence” for NTP, and the target sites are reported in the table.
-	=	No evidence of carcinogenic activity
.	=	Not tested in the sex-species group.
l	=	The NTP evaluation is “inadequate” for experiments in this sex-species, i.e., “studies that, because of major qualitative or quantitative limitations, cannot be interpreted as valid for showing either the presence or absence of carcinogenic activity.”
s	=	The highest level of evidence at the target site is “some evidence of carcinogenic activity” in an NTP bioassay.
- <sup>a</sup>	=	Used for NCI Technical Reports. The “a” indicates that the NCI Technical Report stated that tumors were associated with administration of the compound in the sex-species group. The “a” opinion generally corresponds to an NTP-assigned level of “equivocal” for these NCI bioassays.
- <sup>a, u</sup>	=	In these few cases NCI stated that the tumors were “associated” with compound administration, while the NTP later assigned the level of evidence as “positive” rather than “equivocal.” NTP noted that “these experiments were particularly difficult to evaluate based on the wording in the Technical Report Summaries”.
- <sup>e</sup>	=	The highest level of evidence for the sex-species group is “equivocal”.

**Tissue codes:** adr = adrenal gland; bon = bone; cli = clitoral gland; eso = esophagus; ezy = ear/Zymbal’s gland; hag = harderian gland; hmo = hematopoietic system; kid = kidney; lgi = large intestine; liv = liver; lun = lung; mgl = mammary gland; myc = myocardium; nas = nasal cavity (includes tissues of the nose, nasal turbinates, paranasal sinuses and trachea); nrv = nervous system; orc = oral cavity (includes tissues of the mouth, oropharynx, pharynx, and larynx); ova = ovary; pan = pancreas; per = peritoneal cavity; pit = pituitary gland; pre = preputial gland; ski = skin; smi = small intestine; spl = spleen; sto = stomach; sub = subcutaneous tissue; tes = testes; thy = thyroid gland; ubl = urinary bladder; ute = uterus; vag = vagina; vsc = vascular system.

**Mutagenicity:** A chemical is classified as mutagenic (“+”) in the *Salmonella* assay if it was evaluated as either “mutagenic” or “weakly mutagenic” by Zeiger (Gold and Zeiger, eds., *Handbook of Carcinogenic Potency and Genotoxicity Databases*, , CRC Press, 1997, pp. 687-729; Zeiger, pers. comm.) or as “positive” by the Gene-Tox Program (Kier et al., *Mutat. Res.* 168: 69-240, 1986; Auletta, pers. comm.). Other chemicals evaluated for mutagenicity by these two sources are reported as “-”. The symbol “.” indicates no evaluation in *Salmonella* in either of these 2 sources.

**Superscript following chemical name**

*	=	Experiments on this chemical are also included in the Carcinogenic Potency Database from published papers in the general Literature.
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