

Hydroxytriazine (HYB283-02): sc-57877

BACKGROUND

Hydroxytriazines (also referred to as hydroxyatrazines or ATOHs) are a result of the degradation of triazines (atrazines), a group of chemicals frequently used as herbicides. Hydroxytriazine is the major metabolite of triazine in nearly all surface soils. Triazine compounds incorporate heterocyclic rings that enclose three nitrogen atoms. Several triazine compounds (cyanazine, propazine, terbuthylazine and atrazine) function chiefly as herbicides. Hydroxytriazines are considered to be ecologically problematic and persistent due to their soil retention properties; they immediately form electron-transfer complexes with soil-bound humic substances. Degradation of triazine *in vivo* proves to be very similar to its dissipation in the environment, producing many of the same metabolites. Triazine and its degradation products are utilized in many industrial processes as well, including uses in explosives and dyes. Although health risks are considered "not likely", researchers report that atrazine exposure alters the onset of puberty in male rats.

REFERENCES

- Hance, R.J. and Chesters, G. 1970. Extraction of hydroxyatrazine from soil. *Analyst* 95: 106.
- Bakke, J.E., Larson, J.D. and Price, C.E. 1972. Metabolism of atrazine and 2-hydroxyatrazine by the rat. *J. Agric. Food Chem.* 20: 602-607.
- Foster, T.S., Khan, S.U. and Akhtar, M.H. 1981. Metabolism of deethylatrazine, deisopropylatrazine, and hydroxyatrazine by the soluble fraction (105000 g) from goose liver homogenates. *J. Agric. Food Chem.* 28: 1083-1085.
- Schiavon, M. 1988. Studies of the leaching of atrazine, of its chlorinated derivatives and of hydroxyatrazine from soil using ¹⁴C ring-labeled compounds under outdoor conditions. *Ecotoxicol. Environ. Saf.* 15: 46-54.
- Schiavon, M. 1988. Studies of the movement and the formation of bound residues of atrazine, of its chlorinated derivatives and of hydroxyatrazine in soil using ¹⁴C ring-labeled compounds under outdoor conditions. *Ecotoxicol. Environ. Saf.* 15: 55-61.
- Martin-Neto, L., Traghetta, D.G., Vaz, C.M., Crestana, S. and Sposito, G. 2001. On the interaction mechanisms of atrazine and hydroxyatrazine with humic substances. *J. Environ. Qual.* 30: 520-525.
- T.E. Stoker, D.L. Guidici, S.C. Laws and R.L. Cooper. 2002. The effects of atrazine metabolites on puberty and thyroid function in the male Wistar rat. *Toxicol. Sci.* 67: 198-206
- Laws, S.C., Ferrell, J.M., Stoker, T.E. and Cooper, R.L. 2003. Pubertal development in female Wistar rats following exposure to propazine and atrazine biotransformation by-products, diamino-S-chlorotriazine and hydroxyatrazine. *Toxicol. Sci.* 76: 190-200.
- Belleville, E., Dufva, M., Aamand, J., Bruun, L., Clausen, L. and Christensen, C.B. 2004. Quantitative microarray pesticide analysis. *J. Immunol. Methods* 286: 219-229.

SOURCE

Hydroxytriazine (HYB283-02) is a mouse monoclonal antibody raised against Hydroxytriazine-derivative coupled to carrier protein.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Hydroxytriazine (HYB283-02) is recommended for detection of surfaces coated with proteins conjugated with hydroxytriazine derivatives by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other closely related compounds.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.