

Internal CYP 450 1A2 Bio-Activation

- P450 1A2 is responsible for metabolic bio-activation of several prominent environmental carcinogens including:

Nitroaromatics
Aromatic amines
Polyaromatic hydrocarbons (PAHs)

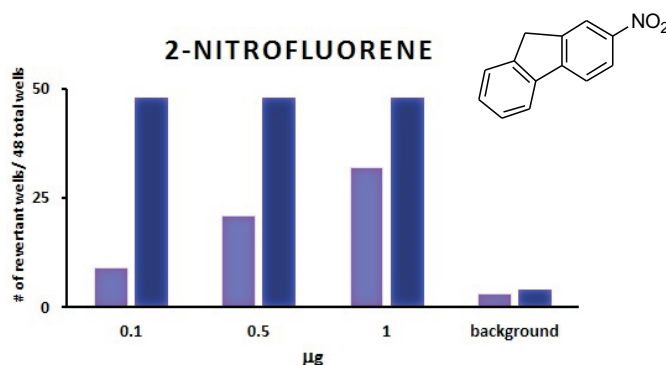
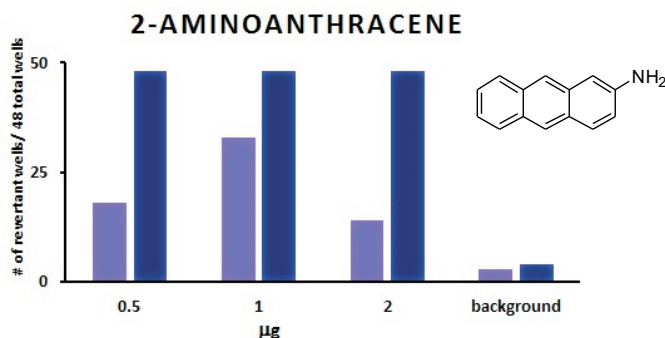
- Short-lived, reactive metabolites are produced within the bacterial cell adjacent to the target DNA.

- Eliminates the need to incorporate Sg liver extract.

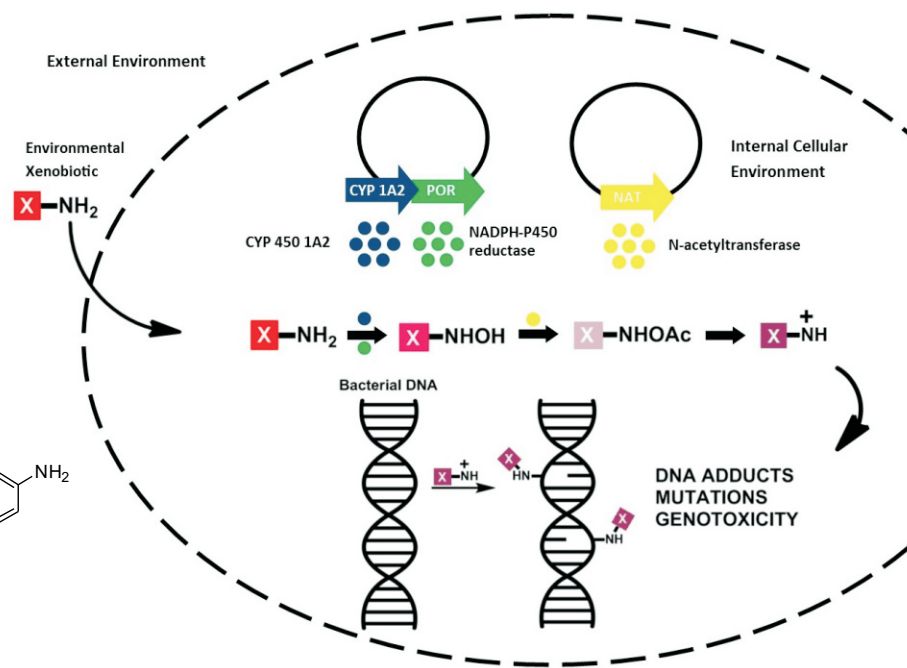
- Improvements in sensitivity and selectivity compared to traditional Ames assays.

- Response suppression from interactions with Sg lysate mix is eliminated.

- The system expresses recombinant human proteins rather than rat liver extract, allowing for better correlation to human health.



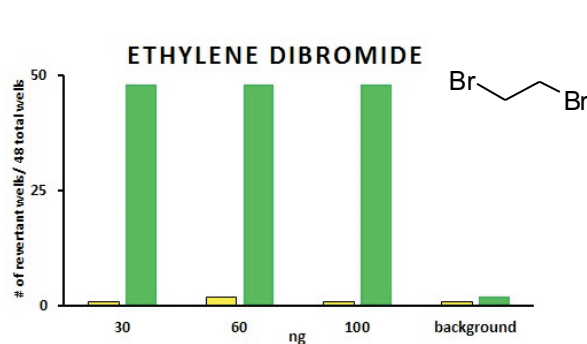
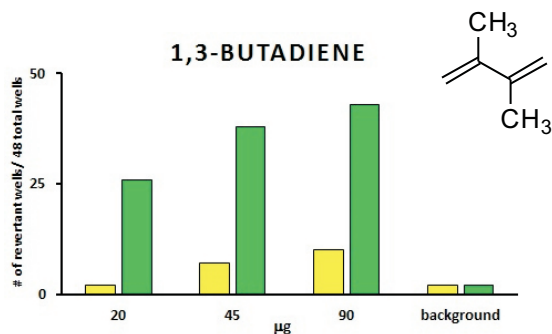
Mutagenic response for two well known carcinogens tested with traditional bacterial strains (purple) and new Ames-Express bacterial strains (blue)



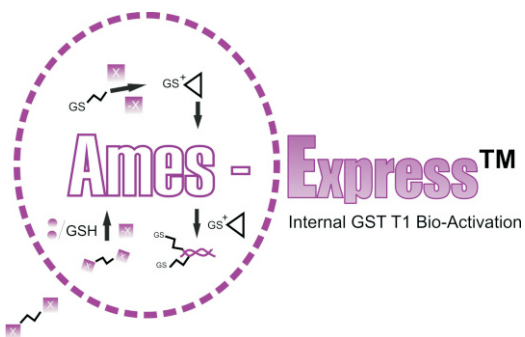
- IDEAL for mutagenic analysis of environmental air, water and soil samples.
- Increased biological relevance for human health risk assessment.
- Kits are easy to use and include all plastics, reagents, controls and bacteria.



EBPI's Ames Express strains are a new line of bacterial strains that express human metabolic enzymes for reverse mutation assays, commonly known as the Ames Test.

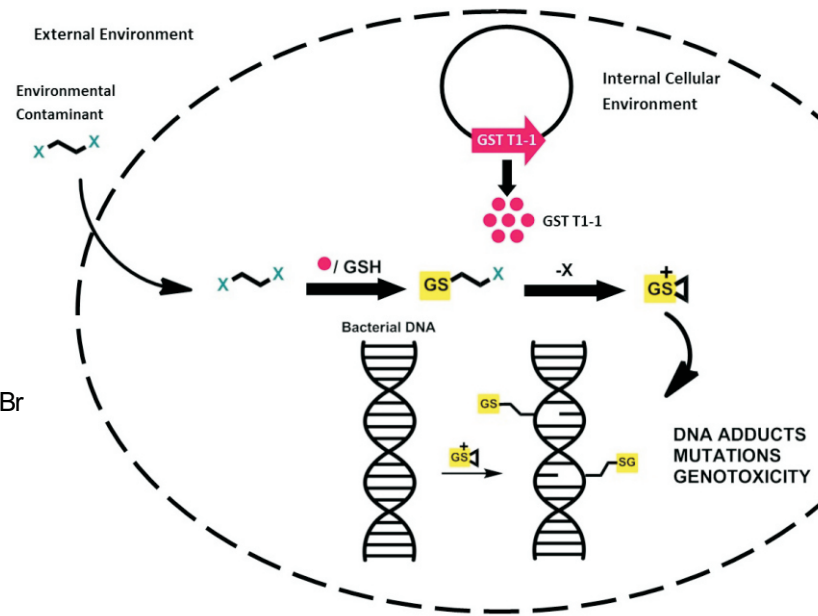


Mutagenic response for two industrial pollutants tested with traditional strains (yellow) and new Ames Express™ bacterial strains (green).



- IDEAL for mutagenic analysis of environmental air, water and soil samples.
- Targets pollutants and by-products from industry, energy development, waste water, drinking water treatment.
- Kits include all plastics, reagents, controls and bacteria with options to include consulting services.

The new Ames-Express assays are **ESSENTIAL** tools for mutagenicity testing in **BIOMEDICAL** and **ENVIRONMENTAL** toxicological assessment.



- **GST T1-1 is a conjugation enzyme that bioactivates SEVERAL important industrial toxicants.**

- Ethylene dibromide (EDB)
- 1,3-butadiene
- Dichloromethane
- Quinones

- Reactive glutathione conjugates created in the kidneys potentiate carcinogenic mechanisms for these compounds.
- Highly sensitivity for industrial contaminants in environmental matrices due to selective bio-activation
- Response suppression from interactions with S9 lysate mix is eliminated.
- Targeted detection for haloalkanes and haloalkenes.