Validation data for L-Kynurenine

https://www.invivogen.com/kynurenine

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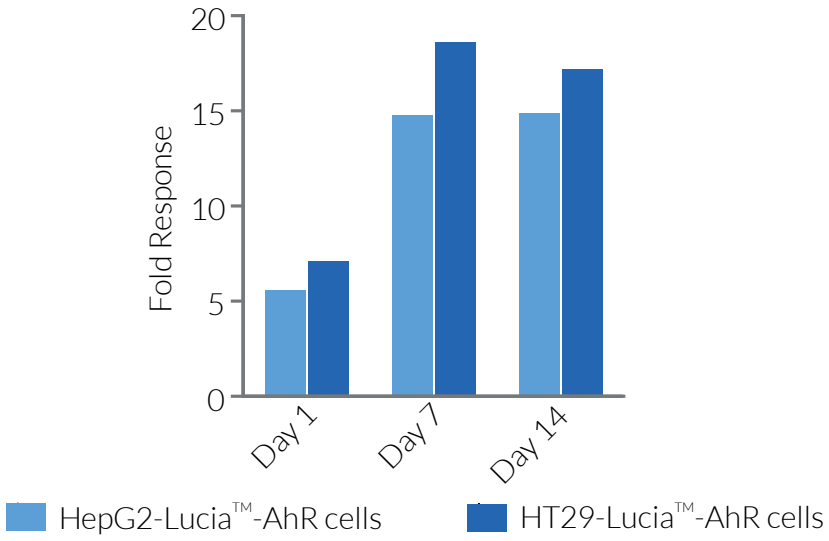
Version 19C08-NJ

L-Kynurenine (β-Anthraniloyl-L-Alanine) is an endogenous agonist for the cytosolic aryl hydrocarbon receptor (AhR) that results from tryptophan metabolism. Yet, L-Kynurenine's mode of action on AhR is still unclear. Indeed, L-Kynurenine could be a low-affinity AhR pro-ligand that is slowly converted in high-affinity compounds acting as AhR agonists at subnanomolar concentrations. This conversion occurs independently of enzymes, when fresh crystalline L-Kynurenine is resuspended as a solution, and gives rise to trace-amounts of derivatives named TEACOPs (trace-extended aromatic condensation products).
This increase in L-Kynurenine's potency is detected at least 24h upon resuspension when tested on InvivoGen's HepG2-Lucia™-AhR and HT29-Lucia™-AhR cells. L-Kynurenine's potency increases within days and reaches a plateau between day 7 and day 14 post-resuspension.

Evaluation of cellular AhR activation by L-Kynurenine



L-Kynurenine induces a time-dependent response in HepG2-Lucia™ Ahr and HT29-Lucia™ Ahr cells. The cells were incubated with 33 µg/ml (160 µM) of L-Kynurenine that had been resuspended and incubated at room temperature for 1, 7 or 14 days. After overnight incubation, the AhR activation was assessed by determining Lucia luciferase activity in the supernatant using QUANTI-Luc™. Data are expressed as fold responses, as compared to non-induced cells. DMSO final concentration impacts cells viability and AhR activation. We recommend to include a control dilution of DMSO in your assay. Using our protocol, a 33 µg/ml (160 µM) L-Kynurenine concentration includes 1.7% DMSO.

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