

Validation data for 293-Dual™ mSTING cells

<https://www.invivogen.com/293-dual-msting>

For research use only

Version 19K25-MM

293-Dual™ mSTING (ISG/KI-IFN β) reporter cells were designed to study murine STING. They stably express two inducible reporter constructs that enable the simultaneous analysis of interferon regulatory factor (IRF) activation, through monitoring the activity of SEAP, and interferon- β (IFN- β) expression, through assessing the activity of the secreted Lucia luciferase. These cells were stimulated with various cyclic dinucleotides (CDNs) and the murine STING ligand DMXAA. Stimulation with DMXAA, 2'3'-cGAMP and 3'3'-cGAMP resulted in robust dose-dependent IRF responses (see figure 1). Modest IFN- β induction was observed in response to DMXAA and to all the CDNs tested; 2'3'-cGAMP, 3'3'-cGAMP, 3'3'-cGAMP fluorinated and 2'3'-cGAMP(PS)₂ (Rp/Sp), a bis-phosphorothioate analog of 2'3'-cGAMP (see figure 2).

IRF induction (SEAP reporter)

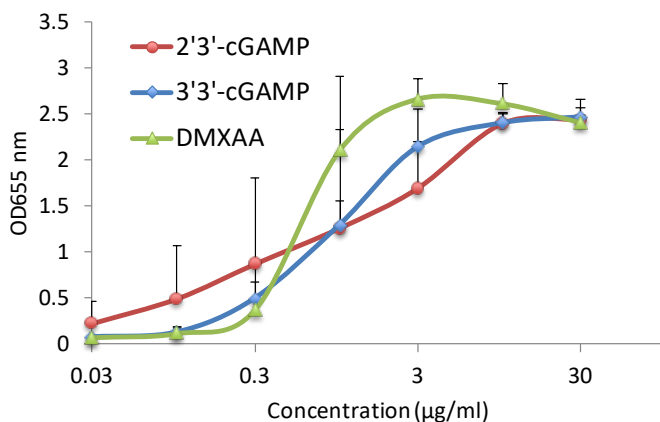


Figure 1: Dose-responses of 293-Dual™ mSTING cells stimulated with 2'3'-cGAMP, 3'3'-cGAMP and DMXAA. After 24h incubation, IRF induction was assessed by measuring the levels of SEAP using QUANTI-Blue™ and by reading the optical density (OD) at 655 nm.

IFN- β induction (Lucia luciferase reporter)

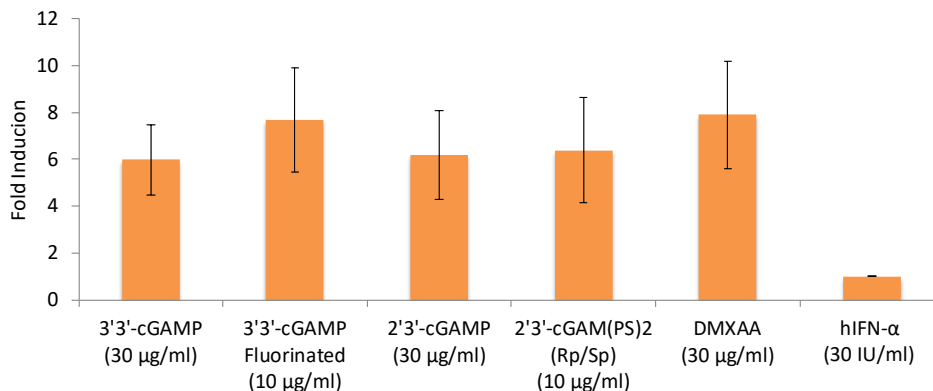


Figure 2: 293-Dual™ mSTING cells were stimulated with 3'3'-cGAMP (30 µg/ml), 3'3'-cGAMP fluorinated (10 µg/ml), 2'3'-cGAMP (30 µg/ml), 2'3'-cGAMP(PS)₂ (Rp,Sp) (10 µg/ml), DMXAA (30 µg/ml) and human IFN- α (30 IU/ml). After 24h incubation, IFN- β induction was assessed by measuring the levels of Lucia luciferase using QUANTI-Luc™ and by reading the relative light units (RLUs) in a luminometer. The IFN- β response is expressed as a fold induction (calculated by dividing the RLUs for the treated cells by the RLUs for the untreated cells).

TECHNICAL SUPPORT

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