Validation data for 293-Dual™ hSTING A162 cells

https://www.invivogen.com/293-dual-hsting-a162

For research use only

Version 19K25-MM

293-Dual™ hSTING (ISG/KI-IFNb) A162 reporter cells were designed to study the A162 isoform of human 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. The CDNs tested induced a robust dose-dependent IRF response (see figure 1). Due to the presence of a unique point mutation (S162A) in the human STING gene, these cells display strong IRF and IFN-β responses to DMXAA. In addition, IFN-β induction was observed in response to all the CDNs tested; 2'3'-cGAMP, 3'3'-cGAMP, 3'3'-cGAMP fluorinated and 2'3'-cGAM(PS)$_2$ (Rp/Sp), a bis-phosphorothioate analog of 2'3'-cGAMP (see figure 2).

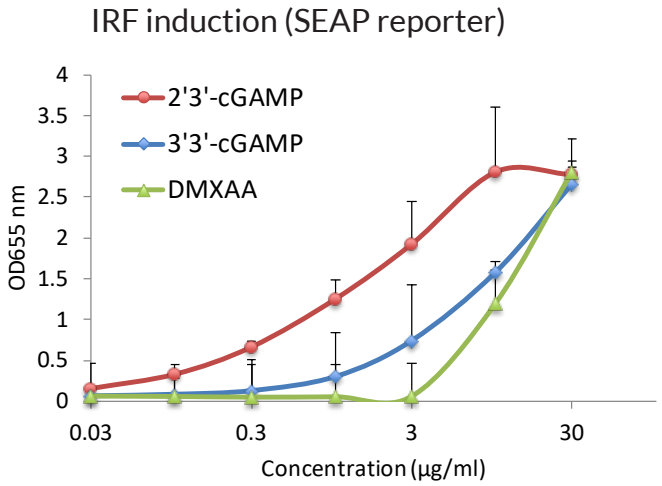

Figure 1: Dose-responses of 293-Dual™ hSTING A162 cells stimulated with 2'3'-cGAMP, 3'3'-cGAMP and DMXAA. After 24h incubation, IRF induction was assessed by measuring the levels of SEAP using QUANTI-Blue™ and by reading the optical density (OD) at 655 nm.

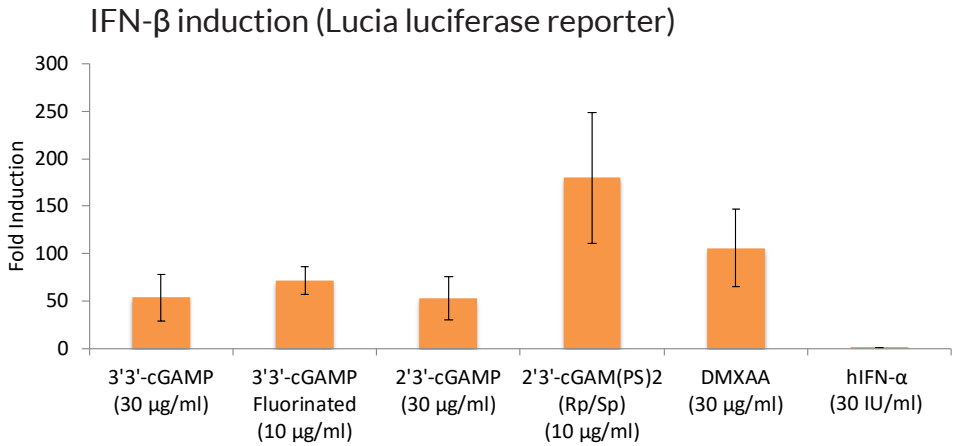

Figure 2: 293-Dual™ hSTING A162 cells were stimulated with 3'3'-cGAMP (30 µg/ml), 3'3'-cGAMP fluorinated (10 µg/ml), 2'3'-cGAMP (30 µg/ml,) 2'3'-cGAM(PS)$_2$ (Rp,Sp) (10 µg/ml), DMXAA (30 µg/ml) and human IFN-α (30 IU/ml). After 24h incubation, IFN-β induction was assessed by measuring the levels of 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
InvivoGen USA (Toll-Free): 888-457-5873
InvivoGen USA (International): +1 (858) 457-5873
InvivoGen Europe: +33 (0) 5-62-71-69-39
InvivoGen Hong Kong: +852 3622-3480
E-mail: info@invivogen.com

InvivoGen
www.invivogen.com