



**Nacalai USA**  
Innovations for Life Sciences.



# **TR-FRET KRAS Assays**

***Accelerating Drug Discovery***

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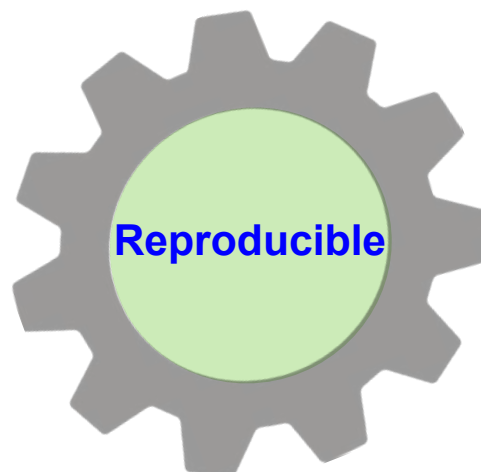
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The KRAS gene was discovered as part of the Kirsten murine sarcoma virus in 1967. In the 1980s, it was established as an oncogene when mutated KRAS genes were shown to turn normal cells into cancerous ones. Since the time it was established as an oncogene to recent years, KRAS is known to be a difficult drug target, bordering on “undruggable”. It was not until 2021 that the first KRAS drug (sotorasib) was approved by the FDA, more than half a century since the KRAS gene was discovered.

Aurora Biolabs LLC and its protein structure determination sister company, Structure Based Design (SBD), Inc. have been helping researchers and companies make KRAS druggable since 2007. Aurora Biolabs and SBD have been instrumental in developing KRAS screening assays and solving KRAS crystal structures and KRAS-drug co-structures for Amgen’s AMG510 (sotorasib) and Mirati’s MRTX1133.



# KRAS-cRAF-CYPA-Inhibitor Assays

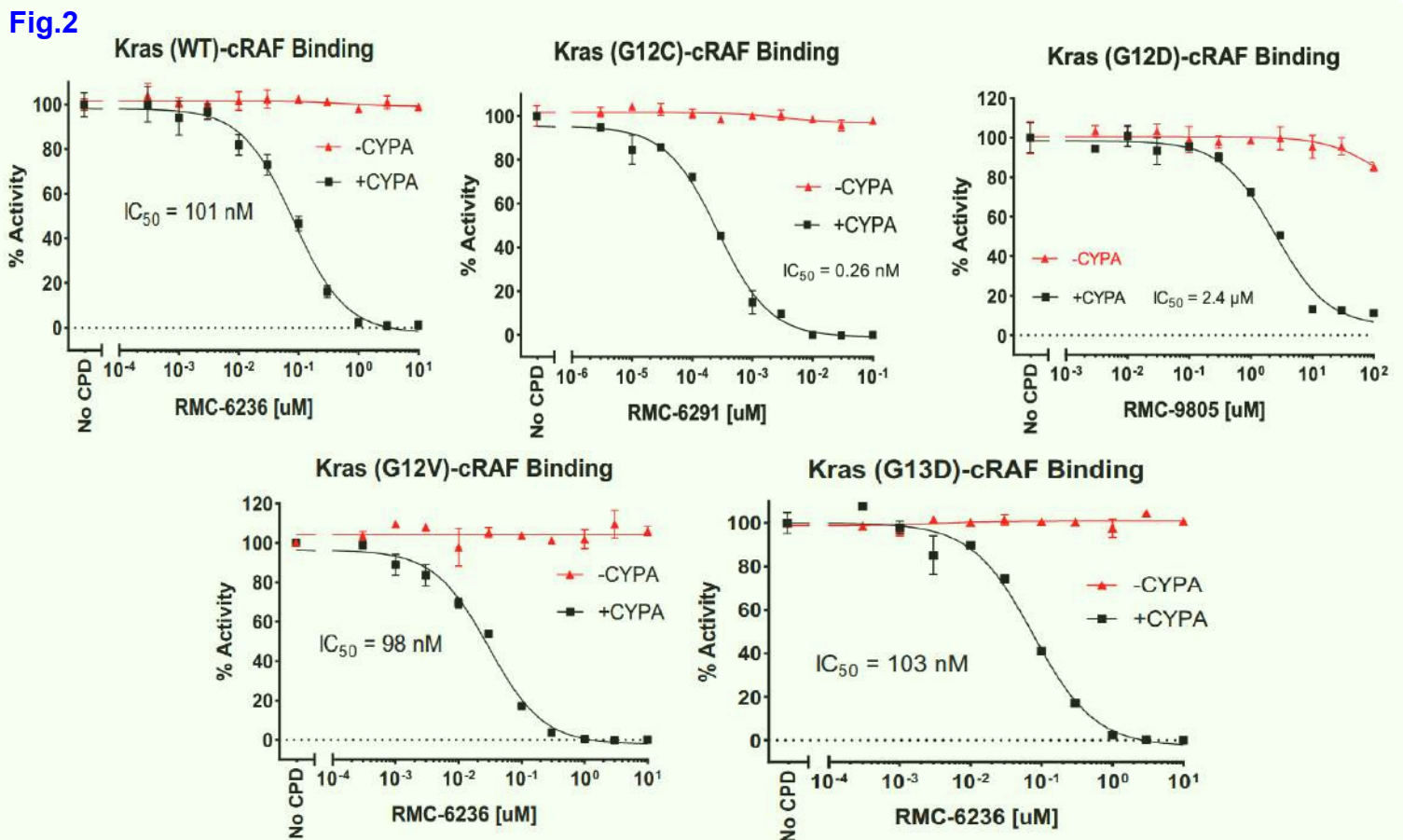
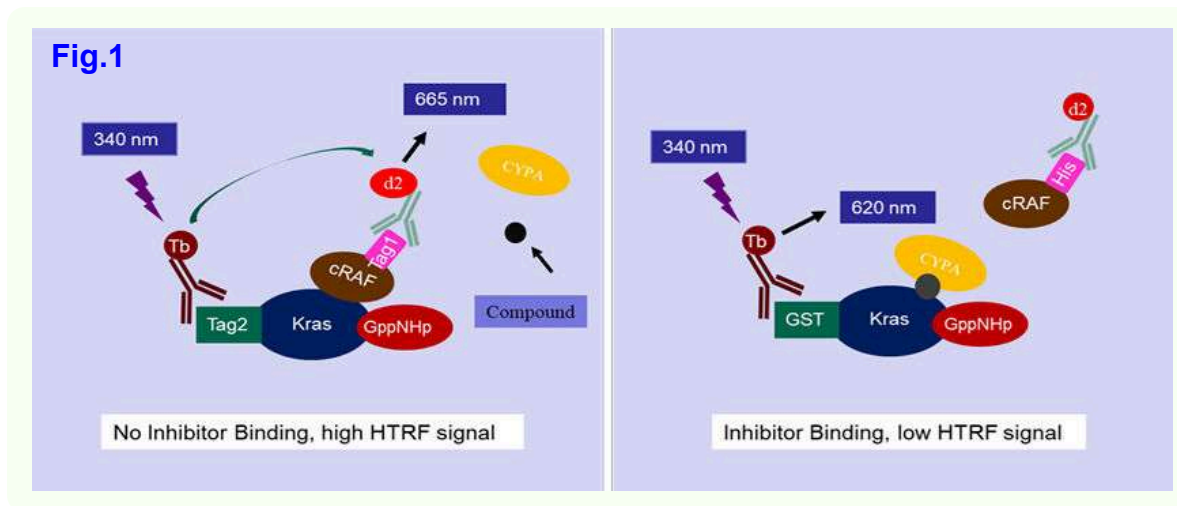
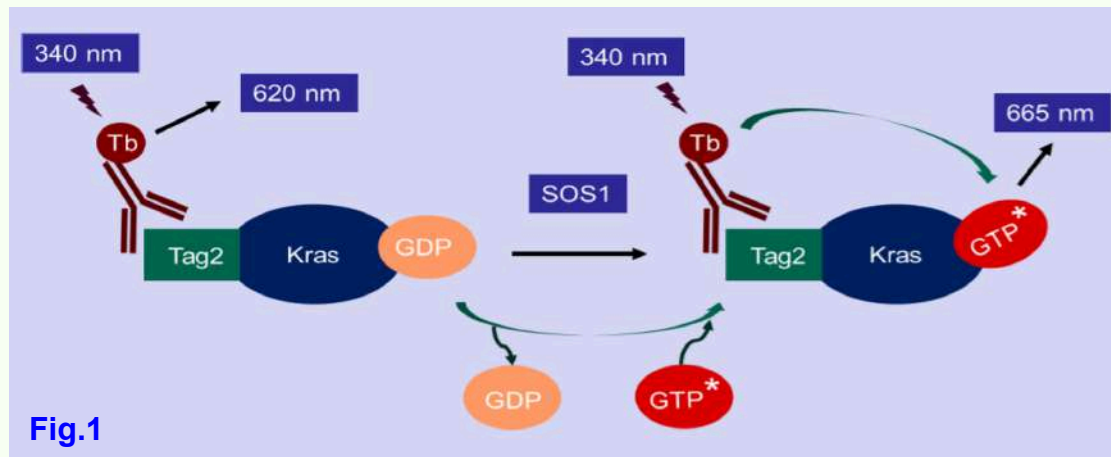


Fig. 1: Graphical representation of KRAS-cRAF-CYPA-Inhibitor assay's working mechanism.  
 Fig. 2: Results from the binding assays of KRAS WT, G12C, G12D, G12V, and G13D at different concentrations of RMC inhibitors.



# KRAS Nucleotide Exchange Assays



**Fig.2**

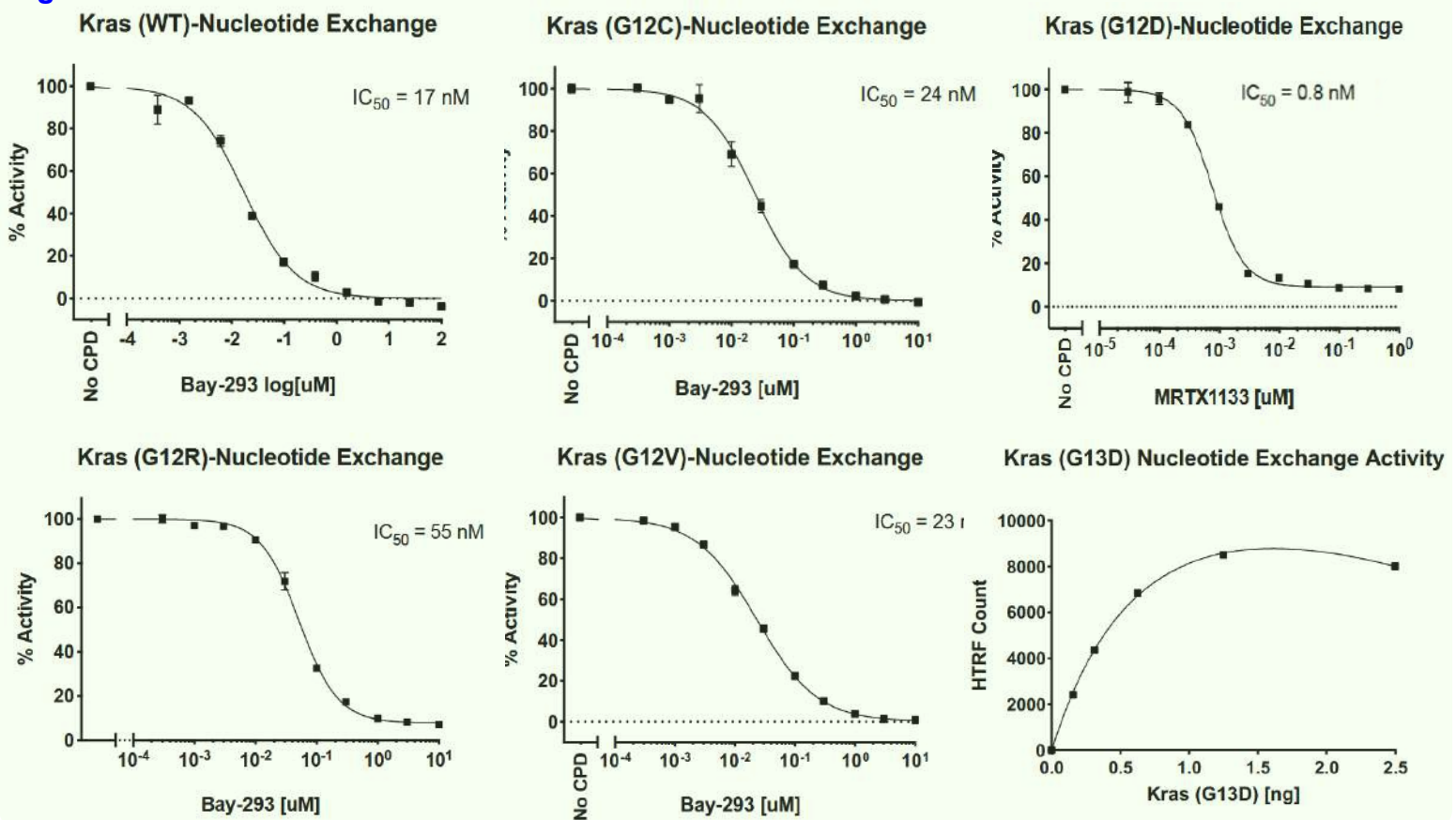
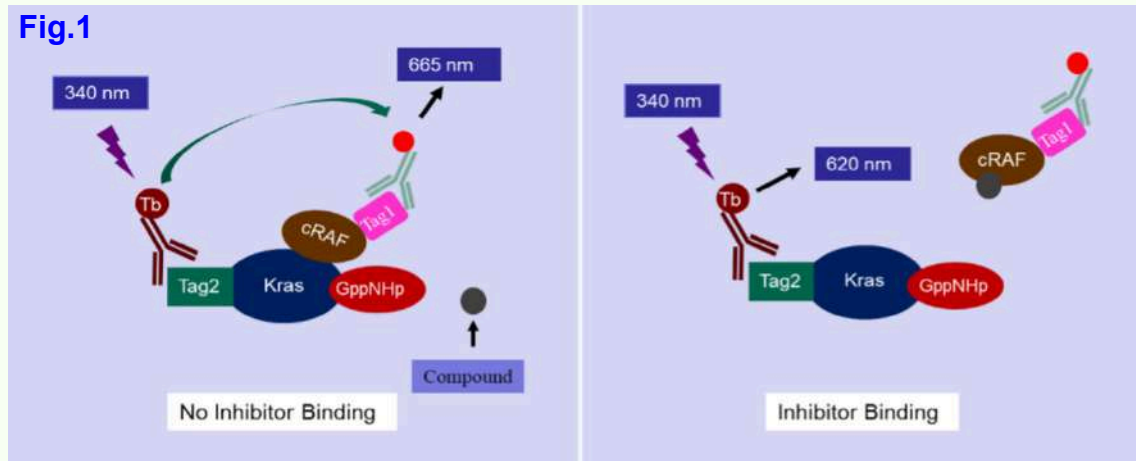


Fig. 1: Graphical representation of Nucleotide Exchange Assay's working mechanism.  
 Fig. 2: Results from the nucleotide exchange assays of KRAS WT, G12C, G12D, G12R, G12V, and G13D at different concentrations of MRTX1133 and Bay-293 inhibitors.

# KRAS-cRAF Binding Assays

**Fig.1**



**Fig.2**

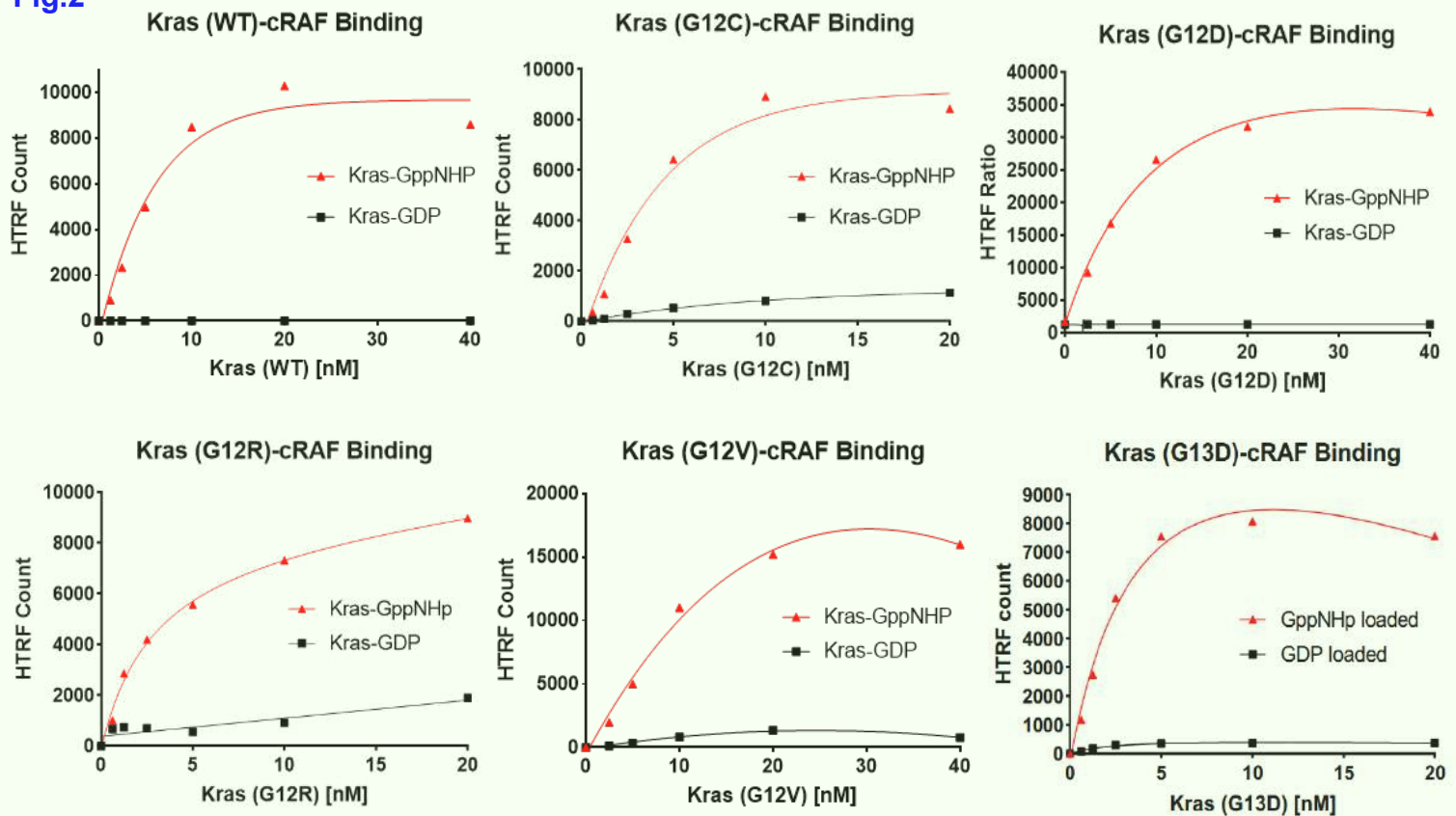


Fig. 1: Graphical representation of KRAS-cRAF Binding Assay's working mechanism.  
 Fig. 2: Results from the binding assays of KRAS WT, G12C, G12D, G12R, G12V, and G13D at different concentrations of KRAS.

# TR-FRET Assays Catalog

CATALOG NUMBER	ASSAY KITS	SIZE
5727-4121CK	Kras WT/cRAF/CYPA/Inhibitor Assay Kit	384 reactions
5727-4122CK	Kras G12C/cRAF/CYPA/Inhibitor Assay Kit	384 reactions
5727-4123CK	Kras G12D/cRAF/CYPA/Inhibitor Assay Kit	384 reactions
5727-4128CK	Kras G12V/cRAF/CYPA/Inhibitor Assay Kit	384 reactions
5727-4133CK	Kras G13D/cRAF/CYPA/Inhibitor Assay Kit	384 reactions
5727-4121NK	Kras WT Nucleotide Exchange Assay Kit	384 reactions
5727-4122NK	Kras G12C Nucleotide Exchange Assay Kit	384 reactions
5727-4123NK	Kras G12D Nucleotide Exchange Assay Kit	384 reactions
5727-4127NK	Kras G12R Nucleotide Exchange Assay Kit	384 reactions
5727-4128NK	Kras G12V Nucleotide Exchange Assay Kit	384 reactions
5727-4133NK	Kras G13D Nucleotide Exchange Assay Kit	384 reactions
5727-4121BK	Kras WT-cRAF Binding Assay Kit	384 reactions
5727-4122BK	Kras G12C-cRAF Binding Assay Kit	384 reactions
5727-4123BK	Kras G12D-cRAF Binding Assay Kit	384 reactions
5727-4127BK	Kras G12R-cRAF Binding Assay Kit	384 reactions
5727-4128BK	Kras G12V-cRAF Binding Assay Kit	384 reactions
5727-4133BK	Kras G13D-cRAF Binding Assay Kit	384 reactions

