

# NTRK Probes

## MULTICOLOR DNA PROBE PANELS

NTRK1, NTRK2, and NTRK3 code for proteins TRKA, TRKB, and TRKC respectively. These proteins are tyrosine kinases and have shown to be actionable targets in patients with non-small cell lung cancer.<sup>1</sup> Like the clinically significant ALK gene, the proteins encoded by NTRKs are kinases, which allow them to be targeted by the same medications that are used in patients with ALK aberrations.<sup>2</sup>


1. Ricciuti, B., Brambilla, M., Metro, G. et al. *Med Oncol* (2017) 34: 105. <https://doi.org/10.1007/s12032-017-0967-5>

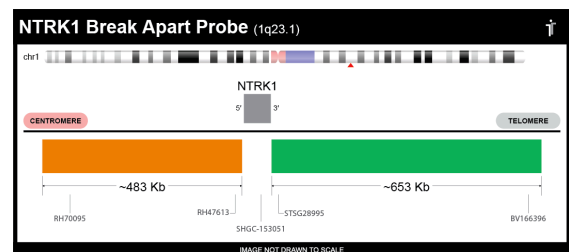
2. Racz, L., Rolfo, C., *Future Medicine* (2016) 5: 1 <https://doi.org/10.2217/fmt-2016-0003>

### NTRK1

Fusion partners for NTRK1 can include TPM3 and LMNA, both of which are associated with increased responsiveness to entrectinib.<sup>3</sup>

3. Sartore-Bianchi A., Ardini E., Bosotti R., et al.; *Journal of the National Cancer Institute*, (2016) Volume 108, Issue 1, 1, djv306, <https://doi.org/10.1093/jnci/djv306>

Genes	Location / STS	Dye Color	Catalog Number
NTRK1	1q23.1		NTRK1BA-20-ORGR

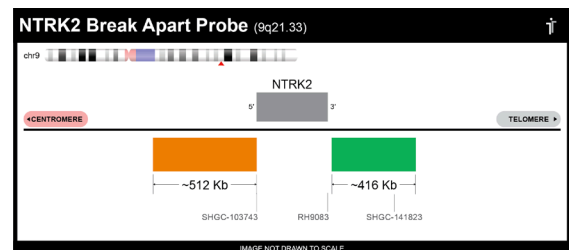


### NTRK2

NTRK2 fusions have been identified in brain tumors, low-grade glioma, and other cancers. Clinical implications are similar to those of NTRK1 and NTRK3.<sup>4</sup>

4. Monika A. Davare, Cristina E. Tognon (2015) <https://doi.org/10.1111/boc.201400096>

Genes	Location / STS	Dye Color	Catalog Number
NTRK2	9q21.33		NTRK2BA-20-ORGR



### NTRK3

Empire Genomics' NTRK3 break apart probe was used to study NTRK3 fusions in childhood melanocytic neoplasms.<sup>5</sup>

5. Wang, L., Busam, K., Benayed, R., et al. *The Journal of Molecular Diagnostics* (2017) vol. 19: issue 3, pg 387-396, <https://doi.org/10.1016/j.jmoldx.2016.11.005>

Genes	Location / STS	Dye Color	Catalog Number
NTRK3	15q25.3		NTRK3BA-20-ORGR

