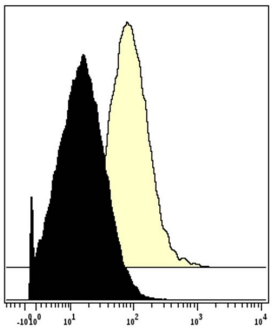
# Anti-Human Androgen receptor-154Sm

Catalog: 3154018B
Package Size: 100 tests
Storage: Store product at 4°C. Do not freeze.
Reactivity: Human
Clone: G122-434
Isotype: Mouse IgG2a
Formulation: Antibody stabilizer with 0.05% Sodium Azide

## Technical Information

**Validation:** Each lot of conjugated antibody is quality control tested by CyTOF® analysis of stained cells using the appropriate positive and negative cell staining and/or activation controls.

**Recommended Usage:** The suggested use is 1 µl for up to 3 X $10^6$ live cells in 100 µl. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.




Human U-87 MG cells (top) and human HepG2 cells (bottom) were fixed, permeabilized, and stained with 154Sm-anti-Androgen Receptor (G122-434). Total viable cells are displayed in analysis.

## Description

The androgen receptor (AR) is a nuclear transcription factor and is composed of four domains: the N-terminal domain (i.e., transcriptional activation domain), DNA-binding domain, a hinge region, and the ligandbinding domain (i.e., C-terminal). A simplistic model of canonical AR signaling involves: (1) androgen binding the AR ligand binding domain, (2) dissociation of chaperone proteins (i.e., heat shock proteins), (3) AR nuclear transport and dimerization (likely through microtubule interaction with the hinge region), (4) binding of dimerized AR to androgen response elements (ARE) located within the promoters of AR target genes, (5) recruitment of AR co-activators, and (6) transcription of AR target genes. A number of additional events, such as AR phosphorylation and interaction with other co-regulators and transcription factors likely also play a role in modulating transcription of AR target genes. The AR represents perhaps the first described lineage-specific oncogene, with prostate cancer demonstrating a persistent addiction to AR-signaling even in its late stages—a reflection of its emergence from normal prostatic epithelium. The survival of a given prostate cancer cell is tightly linked to persistent AR signaling, and as such, these malignant cells will undergo a number of adaptive changes to ensure persistent AR signaling.

## References

Bandura, D. R., et al. Mass Cytometry: Technique for Real Time Single Cell Multitarget Immunoassay Based on Inductively Coupled Plasma Time-of-Flight Mass Spectrometry. *Analytical Chemistry* 81:6813-6822, 2009.

Ornatsky, O. I., et al. Highly Multiparametric Analysis by Mass Cytometry. *J Immunol Methods* 361 (1-2):1-20, 2010.

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