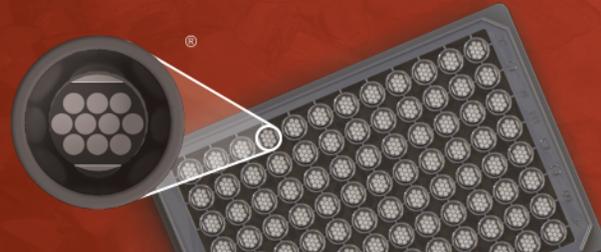


Phospho-STAT5a,b



www.mesoscale.com[®]

Ordering Information

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This datasheet provides information for the T-PLEX[®] Phospho-STAT5a,b v2 Kit.

Product Option	Format	Catalog Numbers			Description
		1-Plate Kit	5-Plate Kit	25-Plate Kit	
Phospho-STAT5a,b v2 Kit	Singleplex	K150AXLD-1	K150AXLD-2	K150AXLD-4	Detection of Phospho-STAT5a,b

Phospho-STAT5a,b can also be measured with the following kits:

Phospho-STAT Panel	Multiplex	K15758D-1	K15758D-2	K15758D-4	Detection of Phospho-STAT3 (Tyr705), Phospho-STAT4 (Tyr693), and Phospho-STAT5a,b
Phospho (Tyr694)/Total STAT5a,b	Multiplex	K15163D-1	K15163D-2	K15163D-4	Detection of Phospho-STAT5a,b and total STAT5a,b

For a complete list of products, please visit our website at www.mesoscale.com.

Signal Transducer and Activator of Transcription 5a and 5b (STAT5a and 5b) are members of the STAT family of transcription factors, part of the JAK/STAT signal transduction pathway, and are approximately 90% identical at the amino acid level. When inactive, STATs are cytoplasmic; upon ligand binding and activation of a cytokine receptor, the receptor binds to a member of the JAK family. The receptor is phosphorylated, recruits a member of the STAT family, which is also phosphorylated, dimerizes, and is then transported into the nucleus where it can act as a transcription factor.¹

STAT5a,b are involved in many different types of cancer (such as breast and prostate), inflammatory responses, and allergic reactions.² STAT5s also play a role in preventing apoptosis in certain cell types and diseases, based upon their role as transcription factors and the genes they regulate.³

Phospho-STAT5a,b Assay Kits

MESO SCALE DISCOVERY[®] T-PLEX assay kits provide a rapid and convenient method for measuring the levels of biomarkers within a single, small-volume sample. The T-PLEX Phospho-STAT5a,b assay has the following characteristics:

- This kit measures phosphorylated human STAT5a (Tyr694) and STAT5b (Tyr699). It can also be used to measure phosphorylated mouse and rat STAT5a (Tyr694) and STAT5b (Tyr699).
- Phospho-STAT5a,b can be measured using the singleplex T-PLEX Phospho-STAT5a,b v2 Kit, multiplex Phospho (Tyr694)/Total STAT5a,b Kit, or multiplex T-PLEX Phospho-STAT Panel Kit.
- The T-PLEX Phospho-STAT5a,b v2 Kit is provided on 96-well plates.
- The SECTOR[™] plates used for the Phospho-STAT5a,b v2 Kit can be read on the MESO[®] SECTOR S 600, MESO SECTOR[®] S 600MM, MESO QuickPlex[®] SQ 120, and MESO QuickPlex SQ 120MM instruments.

This datasheet outlines the performance of the assay.

Source

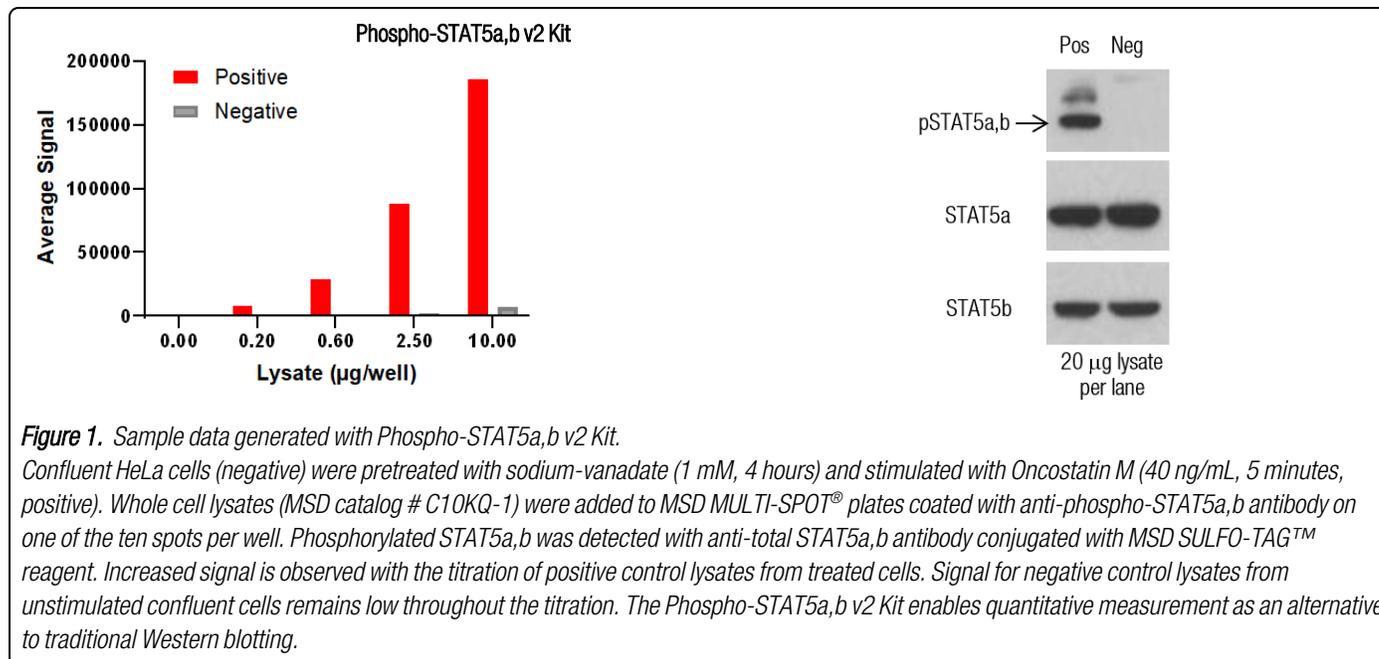
Information on capture and detection antibodies used in the Phospho-STAT5a,b v2 Kit is listed below. The antibodies used in the Phospho-STAT5a,b v2 Kit cross-react with human, mouse, and rat cell lysates.

Analyte	Phospho-specific Antibody	Capture Antibody	Detection Antibody	Assay Generation
Phospho-STAT5a,b	Detection	Mouse Monoclonal	Mouse Monoclonal	C

MSD® T-PLEX Phospho-STAT5a,b

Typical Data

Representative results for the Phospho-STAT5a,b v2 Kit are illustrated in Figure 1. The signal and ratio values provided below are example data; individual results may vary depending upon the samples tested. Western blot analyses of each lysate type were performed with phospho-STAT5a,b and total STAT5a,b antibodies and are shown below for comparison.



Lysate Titration

Average signal for positive and negative control cell lysates and positive/negative ratio using the Phospho-STAT5a,b v2 Kit are presented below.

Lysate (µg/well)	Positive	Negative	Positive/Negative
0.00	107	107	—
0.63	28,141	373	75
2.50	82,708	1,062	78
10.00	153,189	3,272	47

Dash (—) = not applicable.

References

1. Clevenger CV. Roles and Regulation of Stat Family Transcription Factors in Human Breast Cancer. *Am J Pathol.* 2004 Nov;165(5):1449-60.
2. Morales JK, Falanga YT, Depczynski A, Fernando J, Ryan JJ. Mast cell homeostasis and the JAK-STAT pathway. *Genes Immun.* 2010 Dec;11(8):599-608. Epub 2010 Jun 10.
3. Mekori YA, Gilfillan AM, Akin C, Hartmann K, Metcalfe DD. Human mast cell apoptosis is regulated through Bcl-2 and Bcl-XL. *J Clin Immunol.* 2001 May;21(3):171-4.

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