

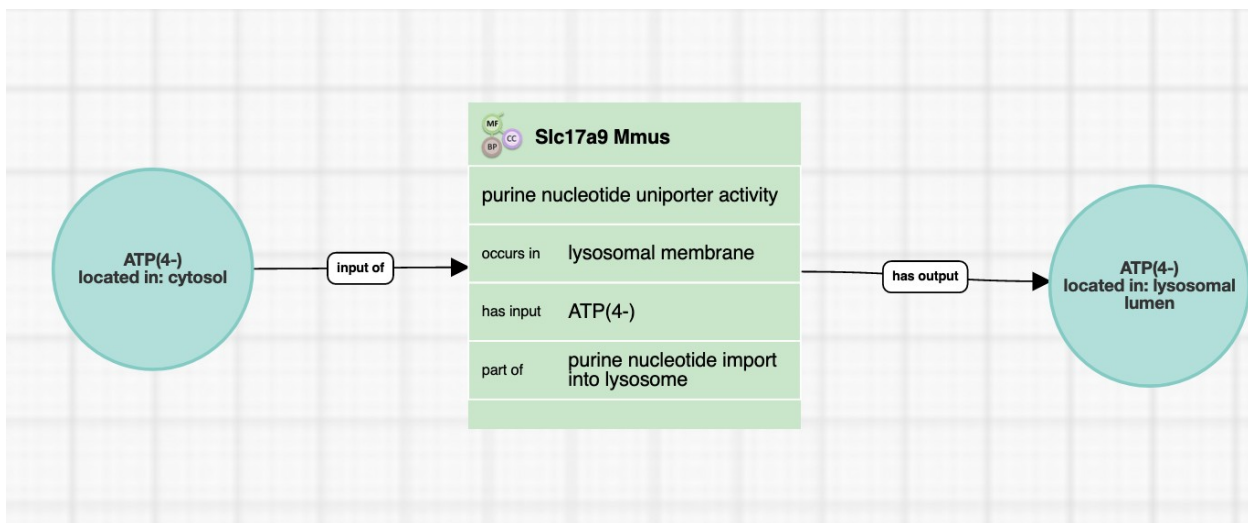
Guidelines for annotating transporter activity

Pathway Editor

The activity unit for a transmembrane transporter is:

- **MF:** 'enables' a child of transmembrane transporter activity ([GO:0022857](#))
- **Context:**
 - The movement of the small molecule substrate is represented by:
 - small molecule (ChEBI) + 'input of' + the start location of the small molecule, captured with the relation 'located in'
 - the transporter activity + 'has output' the small molecule (ChEBI) + the end location of the small molecule, captured with the relation 'located in'
 - **BP** 'part of' the BP in which this transporter activity participates
 - **CC** 'occurs in' a child of membrane ([GO:0016020](#)), e. g.: lysosomal membrane ([GO:0005765](#)).

Example: [SLC17A9 transports ATP to the lysosomal lumen](#)



Form Editor

The activity unit for a transmembrane transporter is:

- **MF:** a child of transmembrane transporter activity ([GO:0022857](#))
- **Context:** The movement of the small molecule substrate is represented by:
 - **'has input'** the small molecule (ChEBI)
 - **BP 'part of'** the BP in which this transporter activity participates
 - **CC 'occurs in'** a child of membrane ([GO:0016020](#)), e. g.: lysosomal membrane ([GO:0005765](#))

Example: [SLC17A9 transports ATP to the lysosomal lumen](#)

1.2		Slc17a9 Mmus	MGI:MGI:19...	Activity Unit	Mar 29, 2023	MF purine nucleotide uniporter activity	BP purine nucleotide import into lysosome	CC lysosomal membran
RELATIONSHIP		TERM		ASP	EXT	EVIDENCE	REFERENCE	WITH
		purine nucleotide uniporter activity	GO:0160042		F			
		Slc17a9 Mmus	MGI:MGI:1919107			direct assay evidence used in manual assertion	PMID:27477609	
						ECO:0000314		
has input		ATP(4-)	CHEBI:30616		ext.	direct assay evidence used in manual assertion	PMID:27477609	
						ECO:0000314		
has output		ATP(4-)	CHEBI:30616		ext.	direct assay evidence used in manual assertion	PMID:27477609	
						ECO:0000314		
part of		purine nucleotide import into lysosome	GO:0141013		P	direct assay evidence used in manual assertion	PMID:27477609	
						ECO:0000314		
occurs in		lysosomal membrane	GO:0005765		C	direct assay evidence used in manual assertion	PMID:27477609	
						ECO:0000314		

Differences between GO-CAM and standard annotation of a transmembrane transporter activity

In standard annotation (captured with the Noctua Form or Protein2GO), the localization of the molecule is not captured; neither is the output of the transporter, since that output relates to the localization of the molecule transported.

Review information

Review date: 2023-07-20

Reviewed by: Cristina Casals, Pascale Gaudet, Patrick Masson